1960

PARLIAMENT OF NEW SOUTH WALES

REPORT

OF THE

Director-General of Public Health

For 1959

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CONTENTS

PAGE
Letter of Presentation to the Hon. W. F. Sheahan, Q.C., LL.B., M.L.A., Minister for Health 7
Vital Statistics, 1959 14

SECTION I

A. COMMUNICABLE DISEASES

Return of Diseases notifiable under the Public Health Acts for the year ended 31st December, 1959 .. 23
Venereal Diseases Act, 1918, Public Health Act, 1902-1952: Report by the Director, Division of Epidemiology (Dr. H. C. Johnston) 32
Poliomyelitis Vaccination Campaign, N.S.W. (Acute Anterior Poliomyelitis): Report by Dr. E. S. A. Meyers 42

B. PUBLIC HEALTH ADMINISTRATION

Report of the Government Analyst (Mr. E. S. Ogg) 45
Pure Food Act, 1908-1958: Report of Chief Inspector (Mr. W. J. Madgwick) 50
Report of Health Inspection Branch (Chief Inspector, Mr. K. R. Horne) 56
Private Hospitals Act, 1908-1954: Report by Dr. A. J. Hope 57
Medico-Legal Section—
    Report of Government Medical Officer for Sydney (Dr. C. E. Percy) 59
    Report of Government Medical Officer for Newcastle (Dr. P. A. Rundle) 60
Health Education and Public Relations (Mr. G. Slough) 60

C. NUTRITION

Report of Nutrition Section 62

D. DIVISION OF MATERNAL AND BABY WELFARE

Report of Director (Dr. Grace J. Browne) —
    Part I, Maternal Welfare 63
    Part II, Infant Welfare 70
    Part III, General 72

E. TUBERCULOSIS

Report of Director of Division of Tuberculosis (Dr. Marshall Andrew) 74

F. DIVISION OF OCCUPATIONAL HEALTH

Report of Director (Dr. A. Bell) 87

G. SCHOOL MEDICAL SERVICE

Report of Director, School Medical Service (Dr. E. S. A. Meyers) 108

H. DENTAL SERVICES

Report of Director, Dental Services (Mr. W. B. Haymet) 123

I. PHYSICALLY HANDICAPPED PERSONS

Consultative Council for the Physically Handicapped: Report by Dr. M. Bertram 130

SECTION II—MEDICAL OFFICERS OF HEALTH

Metropolitan Health District (Dr. J. J. Donnellan) 132
Hunter River Health District (Dr. T. L. Dunn) 134
South Coast Health District (Dr. A. J. Geoffroy) 137
Mitchell Health District (Dr. E. Wallace) 144
Richmond-Tweed Health District (Dr. H. R. Dugdale) 147
Broken Hill and District (Dr. J. T. Cullen) 151

SECTION III—STATE HOSPITALS AND HOMES

Lidcombe State Hospital and Home 152
Strickland Convalescent Home, Vaucluse 154
Newington State Hospital and Home 154
Randwick Chest Hospital 155
Garrawarra Hospital, Waterfall 158
David Berry Hospital 159
Leper Lazaret 160
State Hospitals, etc.: Financial Statistical Summary 161

SECTION IV—PATHOLOGICAL LABORATORIES

Report of Director, Pathological Laboratories (Dr. F. Fraser) 162
Report of Director, Institute of Clinical Pathology and Medical Research (Dr. H. Kramer) 166

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DEPARTMENT OF PUBLIC HEALTH, NEW SOUTH WALES

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DIVISIONS AND BRANCHES

The following Divisions are controlled by the Director-General of Public Health: Maternal and Baby Welfare; Tuberculosis; School Medical Service; Dental Services; Epidemiology; Ocupational Health; Government Medical Officer for Sydney; Medical Officers of Health, Metropolitan, Newcastle, South Coast, Mitchell, Richmond-Tweed and Broken Hill Districts; Microbiological Laboratory; Chemical Laboratory; Institute of Clinical Pathology and Medical Research; Health Education; Pure Food; Health Inspection; etc.

The Hospital Division comprises the David Berry Hospital; Lidcombe and Newington State Hospitals and Homes; Strickland Convalescent Hospital, Vaucluse; Randwick Chest Hospital; Garrawarra Hospital, Waterfall.

LEGISLATIVE ENACTMENTS

The Minister for Health is charged with the administration of the following Acts, for the promotion of the Public Health, execution of which is left to the Director-General of Public Health and the staff working under his control: Food Preservation by Sulphur Dioxide Enabling Act, 1920; Noxious Trades Act, 1902-1944; Private Hospitals Act, 1908-1954; Public Health Act, 1902-1952; Pure Food Act, 1908-1958; King George V and Queen Mary Maternal and Infant Welfare Foundation Act, 1937; Venereal Diseases Act, 1918; Radioactive Substances Act, 1957; Fluoridation of Public Water Supplies Act, 1957; Burials in closed cemeteries and the exhumation of bodies for the purpose of re-interment. etc., are also dealt with.

Report of the Director-General of Public Health

TO

The Honourable the Minister for Health

(The Hon. W. F. SHEAHAN, Q.C., LL.B., M.L.A.)

Sir,

I have the honour to present the Annual Report for the year ended 31st December, 1959, in respect of the work of this Office.

VITAL STATISTICS

The population at the end of 1959 was 3,790,270. The increase in population by excess of births over deaths was 45,617 and by migration 18,967 making a total increase for the year of 64,584; 605 fewer than 1958. The total live births were 80,866, equivalent to 21·51 per 1,000 of the mean population. The number of still births registered was 1,241, equal to 0·33 per 1,000 of the population. Live and still birth rates per 1,000 of population have remained fairly constant for some years now. Deaths during the year numbered 35,249, equivalent to a rate of 9·38 per 1,000 of population. This rate has increased by 0·62 per 1,000 of population over the 1958 figure without obvious particular reason. The number of children under 1 year of age who died was 1,832, equal to 22·65 per 1,000 live births. The Metropolitan area contributed 842 and the remainder of the State 990 of the infant mortality figures.

INFECTIOUS DISEASES

The number of cases of infectious disease notified during the year was 5,775—240 less than in 1958, but with fewer notifications there were 111 more deaths. The increase in deaths, in the main, was due to Staphylococcal Infections (55), Tuberculosis (35) and Infantile Diarrhoea (14). (The Staphylococcal group of diseases were made notifiable in September, 1958.)

Tuberculosis—There was a decrease in notification during 1959 of 233—1,166 in contrast to 1,399 in 1958. Deaths increased from 190 to 224.

Infectious Hepatitis—There were 3,183 notifications with 29 deaths. These figures are comparable to the figures of notifications and deaths in 1958—3,261 cases and 17 deaths.

Scarlet Fever—A decrease of 225 notified cases occurred during 1959 over those notified in 1958. The figures for the two years were 478 and 703 respectively.

TUBERCULOSIS DIVISION

A total of 1,166 new cases of Tuberculosis (all forms) were notified during 1959, a reduction of 233 cases as compared with 1958, while 224 persons died from the disease. The reduction both in the incidence and death rate of the disease is encouraging but both can only be improved, by the use of extensive resources currently available and by the co-operation of the Community.

During the year, 239,827 chest X-rays were carried out by the Division. This number included those examined at the Chest X-ray Centre, 697 George Street, Sydney, and those X-rayed in the mass X-ray programme in the Metropolitan and Country areas. This figure represents an increase of 2,133 over the previous year.

The Epidemiology Section continued to carry out mass and special Tuberculin Surveys. B.C.G. vaccination was limited to National Service Trainees, Aborigines, contacts and those at risk.

Field Surveys were carried out in a number of Metropolitan and Country areas. The general plan entailed a primary Mantoux Survey and subsequently those, showing a positive reaction, were examined radiologically by mobile units of the Tuberculosis Division and the Anti-Tuberculosis Association.

The Visiting Nursing Service is staffed by two doctors and twenty-eight nurses. Of the nursing staff approximately half are allocated to the Metropolitan area and half to the Country areas. The total number of visits for the year 1959 was 28,159.

DIVISION OF EPIDEMIOLOGY

The recording and follow-up of infectious diseases notified under the Public Health Act, 1902, as amended, constitutes one of the most important functions of the Division. Such investigation provides material for the regular assessment of trends, and for the formulation of policy in relation to notifiable infectious diseases.

The year 1959 was notable for the significant increase in the incidence of syphilis over reported figures for many years past. There were 379 notifications (318 males and 61 females), making an increase of 145 (58·4 per cent.) over the 1958 figures. A high proportion of these (77·3 per cent.) were early infectious cases. Of the total cases reported 91 per cent. were in the Metropolitan Area.

For the first time in many years a significant increase in the incidence of gonorrhoea also occurred. There were 2,292 cases of gonorrhoea reported (2,060 males and 232 females) making an increase of 268 (12·3 per cent.) over the 1958 figures.

A total of 50,268 attended at the Division's Venereal Disease Clinics (47,861 males and 2,407 females) during the year.

Prophylactic facilities continued to be available (day and night) at the Clinic in Albert Street, and 21,867 venereal disease treatments were given during 1959.

Pathological examinations for venereal disease during 1959 included 77,874 serological tests, 6,111 smears, and 497 examinations for the spirochaete of syphilis.

POLIOMYELITIS VACCINATION CAMPAIGN

The campaign continued very satisfactorily throughout 1959. During the year 869,910 first, second and third injections of the vaccine were given. In all 4,097,817 doses of the vaccine have now been given since the inauguration of the campaign three and a half years ago in July, 1956. The co-operation of the Councils and the Red Cross Blood Transfusion Service has contributed largely to the success of the campaign.

There were sixteen confirmed cases of poliomyelitis during 1959, and of these fifteen had not been vaccinated. The other case, a child of four years, had two injections nine months previously and suffered only mild paralysis of one leg.

The vaccine is now available to both adults and children.

CONSULTATIVE COUNCIL FOR PHYSICALLY HANDICAPPED PERSONS

The work of assistance in the post paralysis treatment and after care of poliomyelitis sufferers and other physically handicapped persons continued in 1959. In all, 56 persons were directly assisted with after care and rehabilitative measures. Others were guided to appropriate statutory organisations when they were found not to come under the category of eligibility for financial help. Payment was also made for physiotherapy for certain patients at the Far West Home, Manly.

Domiciliary visiting and therapy introduced by the Occupational Therapist has proved most rewarding. The patients have regained confidence and the crafts taught primarily from a therapeutic aspect, have led to subsequent profitable occupation in many instances. These visits have increased from 682 in 1958, to 891 in 1959.

Eventually the difficulties of the referred patient, discharged from hospital where home conditions are poor or adequate arrangements for continued medical supervision have not been assessed and organised sufficiently, are being overcome by co-operation of those concerned. The referring bodies are now realizing the Council's functions which are concerned with rehabilitative measures and not the actual medical care, which is the responsibility of the referring body.

PATHOLOGICAL LABORATORIES

The volume of work carried out by the Pathological Laboratories fell during the year 1959 and is shown by the number of examinations carried out, 137,127 as against 178,237 for the previous year. This reduction in the volume of work is explained by the fact that soon after the middle of the year the newly established Institute of Clinical Pathology and Medical Research at Lidcombe opened and has, since that time, carried out practically all the clinical pathology formerly undertaken by the Laboratories in Macquarie Street.

The work of the Pathological Laboratories at the end of 1959 had been reduced to carrying out certain types of Public Health Bacteriology, Veneral Serology and the preparation of media. A corresponding reduction of staff has taken place and the Division will remain in future a much smaller unit of the Department.

However, bacteriological work continues on the increasingly prominent part played by epidemic Staphylococci and antibiotic sensitivity tests. There has been, though, a continued decline in swabbings for diphtheria.

A steady increase in the number of routine bacteriological tests on public and private water supplies has been carried out. These examinations include the determination of enterococci in swimming pools, the problem of algae in stored waters and their offensive odour, the isolation of Salmonellae from sewage polluted streams with their ever constant health hazard and finally " on the spot " examination of water supplies have been undertaken.

The Medico-Legal work of the Laboratories increased by 25 per cent. in 1959.

THE INSTITUTE OF CLINICAL PATHOLOGY AND MEDICAL RESEARCH

The Institute of Clinical Pathology and Medical Research was opened by the Minister for Health, the Hon. W. F. Sheahan, Q.C., LL.B., M.L.A., on 12th December, 1959. It is situated in the grounds of the Lidcombe State Hospital and although it carried out the pathological work of that Institution, it is an entirely separate unit and is unconnected with the hospital from an administrative standpoint.

The Institute is equipped and staffed to take over and expand the range of clinical pathology which for many years has been carried out under great difficulties at the Microbiological Laboratories in Macquarie Street.

The need for a centralised Institute of this sort arises from the distribution of population in New South Wales, which is such that few local hospitals are large enough to justify the provision of the extensive laboratory facilities which the Institute is able to supply.

The Institute has three main functions: The provision of a centralised and comprehensive Pathology service for the entire State of New South Wales; to conduct central research particularly in pathological changes found in chronic diseases and in the aged; to provide a training centre for technical staff, science graduates and post-graduate medical students wishing to specialise in Clinical Pathology.

THE DIVISION OF OCCUPATIONAL HEALTH

The activities of this Division have extended considerably over recent years, and the scope of its work goes far beyond what is implied by the somewhat limiting term of " Industrial Hygiene ". Apart from its function of investigating hazards connected with industrial processes, the use of dangerous chemical substances, in rural work, has taken the Division into the agricultural field also. Another branch of the Division is concerned with hazards connected with radioactive substances, and still another with atmospheric pollution. It was felt, therefore, that a designation somewhat more descriptive of its work should be found. Accordingly, with Ministerial approval, the name was changed from the Division of Industrial Hygiene to that of the Division of Occupational Health.

The Division carries on its activities in close liaison with the Department of Labour and Industry, Mines Department, Chief Secretary's Department, Local Government Department, Joint Coal Board, The Standards Association, and other bodies in matters of mutual interest.

As will be seen from the detailed report on the Division, a considerable amount of medical and scientific work has been carried out during the year in various branches of industry.

DIVISION OF MATERNAL AND BABY WELFARE

For the year 1959, the infant mortality rate for children in the first year of life was 22·65 per 1,000 live births which was rather higher than that for the previous year, 21·29. The rate for the Metropolitan Area was 20·91 and that for the remainder of the State 24·39. The total number of live and still births was 80,866 and 1,241 respectively.

In relation to maternal mortality, the total number of puerperal deaths amounted to fifty-four, of which eight were due to criminal abortion. The maternal mortality rate for New South Wales was 0·67 per 1,000 live births.

During the year eight new Baby Health Centres were established, and it is anticipated that thirteen others will open by June, 1960. The Department pays 75 per cent. towards the cost of constructing and equipping these Centres (excluding the site), and is responsible for staff. The individual attendances at these Centres were 107,787 (59,851 Metropolitan, 47,936 Country), while the total attendances were 1,015,018 (595,928 Metropolitan, 419,090 Country).

During 1959 ten pre-natal clinics were in operation with attendances at 12,543.

SCHOOL MEDICAL SERVICE

Although funds have now been provided for additional School Medical Officers, difficulty has been experienced in the recruitment of Officers for the areas other than the Metropolitan one.

Lack of personnel has had an adverse effect on the School Medical Inspection programmes which were not completed during the year. Of those fully examined 19,834 or 26·9 per cent. had defects of a notifiable standard excluding dental defects. The most common defects were in Vision (3·8 per cent.), hearing (4·3 per cent.), disease of the lungs (3·4 per cent.) and asthma (3·6 per cent.).

The dental state of school children is a matter of grave concern and is progressively worsening. Medical Officers referred 15·9 per cent. of the children, fully examined, for an oral condition needing urgent attention which was detrimental to their health.

The Child Health Centre, Forest Lodge, continued to function satisfactorily and during the year 394 children were examined. The follow-up procedure by nurses from the Centre has expanded greatly, 289 visits being made, 5,702 children seen and 2,799 home visits paid.

The scheme for medical examination of school children conducted by local medical practitioners expanded in 1959 and included the school children in Captain's Flat in Yarrowlumla Shire and all the schools in Turon Shire, besides those in Lyndhurst Shire where the pilot scheme was commenced in 1958.

The medical examination of the children in Special Schools continued to be of valuable service to both child and parent; 547 full examinations were made, 218 defects notified and 119 parents interviewed.

During the year also 1,548 children were medically examined in sixteen nursery schools. There was a noticeable prevalence of nose and throat, skin, and orthopaedic conditions on examination.

Child Guidance Clinics saw 2,813 new cases (2,173 boys, 640 girls), but owing to staff changes this work was seriously interrupted during 1959. Approval was obtained for a new building at Brisbane Street for the Child Guidance Clinic, and also for the establishment of the position of a Senior Psychiatrist.

The number of speech therapy cases handled during the year was 953 compared with 849 in 1958, but it has, as yet, been found impossible to establish clinics in the country areas. There is an urgent need for one in Wollongong. The Hearing Clinic diagnosed 1,452 new cases and referred these to local doctors and hospitals. The number of cases reviewed was 1,261. The Asthma Clinic interviewed 222 new cases of asthma and 86 of these subsequently received treatment.

No serious epidemic of infectious disease occurred in any Departmental school during 1959.

CHEMICAL LABORATORY

A total of 25,015 samples were examined in the laboratory during the year, including 20,939 collected in connection with the administration of the Pure Food Act, the remainder being relative to the activities of the Public Service and Miscellaneous Authorities.

Under the Pure Food Act, 11,581 milk and 7,857 meat and meat product samples were examined during the year. This was an increase of 668 and 517 respectively over the 1958 figures. Analysis showed that 525 (4·55 per cent.) of all milk samples contravened the standard under the Act. These samples were taken from the Metropolitan area (4,208), the Country districts (1,682) and on behalf of the Milk Board (5,691). A deficiency in milk fat and added water were the main causes of the milk adulteration, while excess fat and sulphur dioxide, as a preservative, were found in the meat and meat product samples.

Sampling, specimens and exhibits for the Public Services of the State included those from Subsidised Institutions (471), Government Stores Department (526), Water (541), Sewage (231), Occupational Health (307), Criminal Investigation (334), Coronial Enquiries (1,356).

In all, 419 specimens of blood and 34 of urine were examined for alcoholic content from the subjects of Coronial enquiries.

DIVISION OF DENTAL SERVICES

During the past year, 30,617 children were examined by the School Dental Service and of this number 92·4 per cent. had experienced dental caries and 77·2 per cent. were in need of dental treatment at the time of examination. The number of children seen was 4,372 fewer than in the previous year. This reduction was the result of a change in policy with regard to dental care in school children. It was felt that more would be accomplished by giving each child more individual attention than by merely relieving immediate symptoms.

This change of approach is shown in the figures covering treatment, for in spite of the lesser number seen the number of visits increased by 5,459 and the number of " fillings and other treatments " increased by 30,841.

In September, 1959, the committee appointed by the Public Service Board completed its report and recommended considerable expansion of the School Dental Service. The recommendations are set out in the Dental Service Report. An approach has been made to the Treasury for the necessary finance to implement the recommendations.

HEALTH INSPECTION BRANCH

Officers of the Health Inspection Branch are authorised to carry out the duties and to make inspections and reports on matters arising out of the administration of the Public Health Act, 1902 (as amended), the Noxious Trades Act, 1902 (as amended), the Local Government Act, 1919 (as amended) and the Regulations and Ordinances thereunder. Their work also relates to certain aspects of the Pure Food Act and Regulations.

The work carried out in 1959 mainly comprised inspection and re-inspection of Local Government Areas to ascertain whether Councils were adequately administering Acts relating to Public Health, and the submission of reports and recommendations regarding conditions found on such inspections.

Applications, by solicitors, in connection with searches concerning unhealthy building ground, numbered 61,930 which was an increase of 11,695 over the number for the previous year.

During the year the Departmental brochure " Domestic Septic Tanks " was printed and issued, and Councils were notified of its availability.

FOOD INSPECTION

The Food Inspection Branch, in pursuance of the provisions of the Pure Food Act, 1908, (as amended) undertakes the general supervision work with regard to the standards required to secure the wholesomeness, cleanliness and freedom from contamination of food and drugs.

Over 105 tons, and 24,000 assorted packages of food and drugs were destroyed as being unfit for human consumption. Approximately 4,200 samples of milk were taken and 181 were found to contravene the standards prescribed. Some 9,200 samples of various foods and drugs were analysed, of these 777 were found to be below standard. Premises inspected totalled 10,352, while 724 Notices were served. During the year, 1,135 prosecutions were successfully undertaken with fines and costs totalling £9,696.

In 1959 also, 1,136 food handling complaints by members of the public were made and these were investigated.

PRIVATE HOSPITALS AND REST HOMES

There are now in New South Wales 233 licensed Rest Homes and 198 licensed Private Hospitals, an increase of 1 and 14 respectively over those in operation in 1958.

The number of beds available in Rest Homes was 4,637, an increase of 361 over last year. The bed capacity of the Private Hospitals was 3,749, an increase of 284.

Overcrowding still remains a prevalently undesirable feature which can only be controlled by further expansion of both Private Hospitals and Rest Homes.

NUTRITION SECTION

The Nutrition Section is responsible to a medical officer for the interpretation and findings of recent nutrition research work and for the dissemination of knowledge on nutritional requirements in health and disease. It also provides information on food values, costs, and cooking methods.

Information is given to the public not only in response to personal and written enquiries, but also by means of radio and television broadcasts. Regular weekly articles are also contributed to a number of Metropolitan and Country papers.

Advice on nutritional and dietary matters is supplied to hospitals and institutions, including lectures and demonstrations to nurses on diets in general.

HEALTH EDUCATION AND PUBLIC RELATIONS

The functions of the Branch are to promote health education and public relations by all available methods, and by the use of as wide a range of media as possible. The press, radio, television, films, posters, and booklets are all employed to reach as large a public as possible.

During the year posters, pamphlets and books to the number of 497,669 were distributed, 175 film screenings were arranged, and 1,678 loans of films from the film library were made. A regular television programme is arranged through Channel 2.

Two new projects have been undertaken during the year. One is the publication of the new journal of the Department of Public Health, " Health in New South Wales ", which has had a gratifying reception. The other is the undertaking of an " attitude survey " to ascertain why there has been a falling off in the attendance at district chest X-rays.

MEDICO-LEGAL SECTIONS AND HOSPITALS ADMISSION DEPOT

Medical examination of Government personnel (2,555) continued during 1959, including police recruits, probationary constables, police cadets and women police. The figures for Newcastle were Public Service personnel examinations (215), returned soldiers (118), certification of insane patients (363).

Medical Legal work comprised post mortem examinations (City Coroner) 2,067, criminal assault cases 207 and the giving of evidence in Court.

The admissions arranged by the Hospital Admission Depot to Metropolitan Hospitals were 1,822. This was 504 less than the 1959 figure due to a lessened demand for beds for acute cases. Difficulty was, however, experienced during the year in obtaining accommodation for chronic cases. Altogether 4,814 chronic cases were admitted to State Hospitals, Hospitals for Chronic Diseases and Convalescent Homes.

HEALTH DISTRICTS

Metropolitan Health District

The District comprises thirty Municipalities, including the Cities of Sydney and Parramatta, two Shires—Hornsby and Warringah—and the Harbour of Port Jackson.

At the end of the year there was an estimated mean population of 1,914,514 in the District, an increase of 24,650 over the previous year.

Deaths during the year totalled 19,904, and deaths from Diseases of the Heart (8,002) and Malignant Neoplasms (3,099) accounted for more than half of this figure.

There were 255 deaths from suicide, 27 from homicide and 953 from accident.

The greatest number of deaths during the year from a single notifiable disease was 145—tuberculosis, while staphylococcal pneumonia claimed eighteen.

There were 1,134 cases of infectious hepatitis notified, 758 cases of tuberculosis (close on half the figure for the whole State), and 194 cases of scarlet fever. Staphylococcal mastitis, staphylococcal pneumonia and staphylococcal infections (149 with 21 deaths) show greatly increased notifications, but this is due to the fact that these three diseases have only recently been made compulsorily notifiable (September, 1958).

The work of supervising and advising Local Authorities in respect of environmental sanitation continued during the year, and again the lack of drainage and sewerage facilities and the housing shortage caused the greatest number of complaints.

Hunter River Health District

Population at the 30th June, 1959, was 305,880.

There were 6,628 live births to mothers resident in the district equivalent to a rate of 21·67 per 1,000 of population.

Deaths numbered 3,023 equivalent to 9·88 per 1,000 of population. Deaths under one year numbered 200, equivalent to a rate of 30·18 per 1,000 live births.

The Medical Officer of Health reports the result of a Round Worm survey of aboriginal children in the mid North Coast and states that with the institution of adequate treatment the infestation was reduced by half.

South Coast Health District

The population of the district at June, 1959, was 299,380, deaths numbered 3,969. There were 7,783 live births and 150 children died under the age of one year during the year under review.

There were 329 notified cases of infectious disease with 12 deaths compared with 237 and 6 deaths in 1958. The increase in the number of cases of infectious disease was due to a greater number of infectious hepatitis notifications, and an increase in the number of cases of scarlet fever. Previously also, staphylococcal infections were not compulsorily notifiable, and these account for 49 of the total.

During 1959, 2,439 applications for septic tanks were received and 2,732 inspections carried out. In 1958, the figures were 747 and 915 respectively. The increase was due to increased building operations, and the amendment of the Local Government Act and Ordinances to include the construction of single treatment septic tanks.

Mitchell Health District

The population of the district at June, 1959, was 138,390. Deaths numbered 1,413. There were 3,270 live births and 69 children died under the age of one year.

There were 451 notified cases of infectious disease with 3 deaths. It is to be noted that 377 of these notified cases were infectious hepatitis. The figure in 1958 was 184. There were 54 cases of scarlet fever notified, a figure comparable to the 1958 one of 60.

During the year 1,179 inspections were carried out compared with 1,216 in 1958, while 63 Noxious Trades were kept under supervision.

Richmond-Tweed Health District

The population in 1959 was estimated at 124,350. There were 1,064 deaths. The number of live births amounted to 2,957 with 56 deaths of children under one year.

During the year 179 cases of infectious disease were notified. Of these 74 were infectious hepatitis. The local Veterinary Practitioners of the area are of the opinion that there is a great reservoir of leptospirosis infection in calves and pigs although only 6 cases were notified during 1959.

Some 703 inspections were made, 414 of these to proposed septic tank sites and 60 to noxious trades.

Broken Hill and District

The population of the Broken Hill Municipal District was estimated at 33,420. There were 263 deaths and 886 births during the same period.

In all 42 cases of infectious disease were notified during the year, 38 of which were Infectious Hepatitis, a figure exactly double that for 1958.

General work included 31 post mortem examinations, 45 Court attendances, 104 Public Service examinations, and 311 examinations and attendances at the Anti-Tuberculosis Clinic.

State Hospitals and Homes and Sanatoria

There was a daily average total of 2,444 persons accommodated in the establishments at Randwick, Strickland Convalescent Hospital, Garrawarra, Lidcombe, Newington and the David Berry Hospital, maintained by the Department. The gross annual maintenance cost per patient was £575 10s. 11d., and the nett annual cost to the State £452 4s. 11d.

The daily average of in-patients at Lidcombe Hospital in 1950 was 1,173, while in 1959, ten years later, this number had increased by 311 (1,484).

At Randwick after the decision in 1958 to reduce bed capacity to 150 patients, a reduction in admissions has necessarily occurred during 1959. But there has been an augmentation of out-patient attendances of discharged patients returning for follow-up examinations. Visits have been made by the medical staff at Randwick to North Ryde Psychiatric Centre and Lidcombe State Hospital.

C. J. CUMMINS,
Director-General of Public Health.

VITAL STATISTICS

POPULATION

The estimated population of New South Wales as at the 30th June, 1959, was 3,790,270, of whom 1,895,903 were males and 1,894,367 were females. The increase in population by excess of births over deaths was 45,617 which was somewhat less than that for 1958 (47,695). The increase by migration was 18,967, which was higher than for the previous year (17,494). The total increase for the year 1959 was 64,584. The estimated mean population for 1959 was 3,758,881.

The estimated population of New South Wales as at 31st December, 1959, was 3,756,375 (males 1,881,302, females 1,875,073) of which total 468,410 (males 205,848, females 262,562) were sixty years of age or greater, and 329,496 (males 141,506, females 187,990) were sixty-five years of age or greater.

The percentage of the aged (65 years and over) in the total population has almost doubled since 1921. Of greater significance is the relative rate of increase and the continuing increase in the index of dependent adults. This index is calculated by determining the proportion of the population aged sixty-five years and over to the working age group fifteen to sixty-four years. Table I sets out the composition of the population in three age groups, and the dependent adult index per one hundred of the population for the Census years 1921, 1933, 1947 and 1954. Included in the same table is an estimate for 1959.

TABLE I—AUSTRALIA

Age Group	Per cent. Population—Years				
	1921	1933	1947	1954	1959
Less than 15 years	31·71	27·48	25·06	28·52	30·03
15 to 64 years	63·86	66·04	66·89	63·18	61·50
65 years and over	4·43	6·48	8·05	8·30	8·47
Dependent adult index per 100	6·93	9·81	12·04	13·14	13·77

Perhaps even more disturbing than this estimate are the American surveys which indicate that approximately 3·5 per cent. of the total population suffer from chronic illness which disables them for a period greater than three months. The older the age group the greater the proportion suffering from such long-term illnesses. The extremes vary from 0·18 per cent. of the total population under the age of fifteen years to 1·4 per cent. of the total population at sixty-five years and greater.

If the figures quoted in American surveys are applicable to the population of New South Wales, approximately 131,500 persons of both sexes are suffering from a chronic illness of this duration, and of this number approximately 30,200 are in the age group fifty-five to sixty-four years (representing 9·7 per cent. of that age group), and approximately 94,600 are in the age group sixty-five years and over (representing 28·7 per cent. of that age group).

LIVE BIRTHS

The total number of live births was 80,866, equivalent to 21·51 per 1,000 of mean population. The actual number of births was 821 above that of the previous year but the rate has remained more or less constant over the past five years. Of the total births 41,316 were males and 39,550 were females.

STILL-BIRTHS

The number of still-births registered during the year 1959 was 1,241, which is 1·51 per cent. of all births live and still and is equal to 0·33 per 1,000 of the population. In the metropolitan area there were 576 still-births and in the remainder of the State 665, representing 1·41 and 1·61 of all births live and still. Comparing these figures with those of the previous year it is found that there has been no significant change.

Under New South Wales legislation—Registration of Births, Deaths and Marriages Act, 1899-1956, " Stillborn child " means any child of seven months' gestation or over not born alive and includes any child not born alive which measures at least 14 inches but does not include any child which has actually breathed.

This definition is, however, not generally accepted by all States, some of which have other definitions. Until some uniformity of assessment is agreed upon the rates in the various States cannot be exactly compared.

The following table shows the position with regard to live and still-births in New South Wales for the past three years:—

TABLE II—LIVE BIRTHS AND STILL-BIRTHS—NEW SOUTH WALES—1957-59

Year	Total Births (Live and Still Combined)	Live Births		Still Births	
		Number	Rate per 1,000 Population	Number	Rate per 1,000 total Births (Live and Still Combined)
METROPOLIS					
1957	39,546	38,962	19·73	584	14·77
1958	40,062	39,540	19·59	522	13·03
1959	40,846	40,270	19·58	576	14·10
REMAINDER OF STATE					
1957	41,192	40,494	24·58	698	16·95
1958	41,191	40,505	24·19	686	16·65
1959	41,261	40,596	23·84	665	16·12
NEW SOUTH WALES					
1957	80,738	79,456	21·93	1,282	15·88
1958	81,253	80,045	21·67	1,208	14·87
1959	82,107	80,866	21·51	1,241	15·11

DEATHS

Table III gives the crude death rates for the various States and Territories of the Commonwealth and also a comparison of the rates for 1958 and 1959.

TABLE III—AUSTRALIA—CRUDE DEATH RATES—STATES AND TERRITORIES—1958 AND 1959

State or Territory	Deaths per 1,000 Mean Population	
	1958	1959
New South Wales	8·76	9·38
Victoria	8·62	8·92
Queensland	8·10	8·59
South Australia	8·63	8·62
Western Australia	7·87	7·65
Tasmania	8·02	8·07
Northern Territory	5·51	6·06
Australian Capital Territory	4·43	4·12
Australia	8·50	8·87

This indicates that there has been a rise in the death rate which is marked in the case of New South Wales, with increases also in some of the other areas.

The actual number of deaths in New South Wales for the two years is: 1958, 32,350; 1959, 35,249.

The deaths for the year 1959 include 19,857 males and 15,392 females, equivalent to 10·55 and 8·20 respectively per 1,000 of the mean population. The rate for the metropolitan area was 10·03 per 1,000 of the population and for the remainder of the State 8·59.

The age groups of those who died in the two years were as follows:—

	1958	1959
Under five years of age	2,087	2,218
Five to sixty-four	10,767	11,341
Sixty-five and over	19,496	21,690
	32,350	35,249

The total deaths for the year 1959 as they occurred at five-year intervals from birth to the age of 80 and over, are set out in the following table:—

TABLE IV

Age Group (Years)	Males	Females	Persons
0– 4	1,283	935	2,218
5– 9	111	80	191
10–14	86	46	132
15–19	210	63	273
20–24	215	79	294
25–29	195	94	289
30–34	298	154	452
35–39	363	247	610
40–44	493	346	839
45–49	791	532	1,323
50–54	1,076	590	1,666
55–59	1,552	778	2,330
60–64	1,839	1,103	2,942
65–69	2,668	1,623	4,291
70–74	3,020	2,233	5,253
75–79	2,626	2,310	4,936
80 and over	3,022	4,177	7,199
Not stated	9	2	11
Total deaths	19,857	15,392	35,249

See Table XIV for Causes of Death—New South Wales, 1959.

INFANTILE MORTALITY

The number of children under one year who died was 1,832, which is equal to 22·65 per 1,000 live births. To this total the Metropolitan area contributed 842 or 20·91 per 1,000 live births and the remainder of the State 990 or 24·39 per 1,000 live births. The rate for the year 1959 was 3·7 per cent. below the average for the previous five years.

The following table shows the infant mortality rates for the years 1941 to 1959. The figures show that there has been a general decline in the infant mortality rate over the nineteen years. The figures for New South Wales, however, have remained relatively high.

The reason for this is not altogether clear and in 1958 a survey was undertaken to ascertain the reason for this relatively high infant mortality. The investigations are not yet completed but it is hoped that the findings will be available during 1960.

TABLE V—INFANT MORTALITY—AUSTRALIAN STATES

Rates per 1,000 Live Births

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	A.C.T.	Australia
1941	43·77	36·21	39·13	32·47	35·28	48·98	83·33	16·39	39·72
1942	40·19	41·67	34·77	39·72	36·86	42·41	43·48	22·96	39·50
1943	36·18	35·76	37·79	36·67	32·63	40·56	75·00	18·62	36·26
1944	30·68	31·96	31·32	29·07	32·57	38·27	22·47	23·44	31·34
1945	30·63	28·03	29·76	28·08	29·52	27·48	55·56	12·35	29·38
1946	30·22	27·16	29·27	27·07	31·06	30·23	30·30	19·31	29·01
1947	29·81	26·28	30·82	24·27	30·92	27·31	43·48	19·85	28·52
1948	30·30	23·93	27·96	29·74	25·60	27·65	35·71	23·45	27·77
1949	27·29	21·89	24·72	27·68	26·42	23·91	37·57	15·87	25·31
1950	27·04	20·09	24·77	24·04	27·13	23·75	36·50	20·96	24·47
1951	26·29	22·61	25·66	24·51	28·73	26·64	44·23	11·96	25·24
1952	24·50	22·29	24·94	23·09	24·91	21·73	31·25	23·59	23·79
1953	24·65	21·15	24·98	20·65	23·83	22·88	39·13	21·57	23·30
1954	25·30	19·30	22·29	21·29	22·54	23·94	17·54	4·67	22·48
1955	24·86	18·37	20·28	23·30	22·44	23·37	50·49	13·94	22·01
1956	23·47	19·32	22·74	19·88	22·70	20·98	43·17	10·21	21·72
1957	22·70	20·16	21·68	20·63	21·09	20·15	34·06	8·82	21·41
1958	21·29	19·23	19·40	22·40	21·52	19·49	31·56	18·04	20·49
1959	22·65	21·21	20·25	20·71	20·16	23·42	38·94	11·75	21·54

ARTERIOSCLEROTIC AND DEGENERATIVE HEART DISEASE

. The increase in the general death rate has been already mentioned. Such increases are noted from time to time in statistical reviews. In some cases specific causes of increased death rates can be traced but in other cases the increase is without any particular cause.

The year 1959 would seem to belong to the latter class. A review of the deaths from Arteriosclerotic and Degenerative Heart Disease and of diseases of the Circulatory System as set out in Table VI indicates that diseases coming under these classifications contributed considerably to the increase in the general death rate.

Diseases of this type, however, are not of an epidemic character and there seems to be no reason why they should take an upturn in any particular year.

It will be seen from the table that the increase in deaths due to Arteriosclerotic and Degenerative Heart Disease have increased by 1,072 as compared with the previous year and are also well above the average for the past four years.

Table VI—Deaths from Arteriosclerotic and Degenerative Heart Disease (Codes 420-422)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	5,673	3,485	9,158	3,234	2,005	2,622
1956	5,885	3,827	9,712	3,295	2,163	2,731
1957	5,575	3,711	9,286	3,065	2,058	2,563
1958	5,720	3,747	9,467	3,089	2,035	2,563
1959	6,416	4,123	10,539	3,409	2,197	2,804

VASCULAR LESIONS AFFECTING THE CENTRAL NERVOUS SYSTEM

The figures indicate little change over the past five years in the number of deaths ascribed to this cause. The main diseases coming under this heading are Subarachnoid Haemorrhage, Cerebral Haemorrhage and Cerebral Thrombosis and Cerebral Embolism. The actual increase in the number dying from this cause is 327, but the rate has remained almost constant.

Both the actual figures and the rate indicate that the increase in deaths from this cause has been in women rather than in men.

MALIGNANT NEOPLASMS

As will be seen from the table below there has not been a significant increase, neither in the actual number of deaths from neoplasms nor in the death rate due to this cause.

Table VII—Deaths from Malignant Neoplasms (Codes 140-205)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	2,471	2,086	4,557	1,409	1,200	1,305
1956	2,508	2,228	4,736	1,404	1,259	1,332
1957	2,611	2,234	4,845	1,435	1,239	1,337
1958	2,650	2,221	4,871	1,431	1,206	1,319
1959	2,676	2,296	4,972	1,422	1,223	1,323

MALIGNANT NEOPLASM OF THE LUNG

A dissection of the figures from neoplasms generally reveals that in the case of cancer of the lung there has been a significant increase over the last five years.

This increase is well illustrated by the figures in Table VIII. The total number of deaths from this cause has risen from 487 in 1955 to 629 in 1959. Of this number (1959) 544 were males and 85 females. The rate also shows an increase from 139—167 per million of mean population.

Table VIII—Deaths from Malignant Neoplasms of the Lung (Including Bronchus, Trachea and Pleura (Codes 162 and 163)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	427	60	487	243	35	139
1956	462	68	530	259	38	149
1957	480	81	561	264	45	155
1958	514	63	577	278	34	156
1959	544	85	629	289	45	167

NEOPLASMS OF THE LYMPHATIC AND HAEMOPOIETIC SYSTEMS

Reference to Table IX giving certain causes of death shows that there has been a small but persistent yearly rise in the number of deaths from this cause. The total number of such deaths in 1955 was 316 and in the year under review it has risen to 380. The increase is slightly higher than would be accounted for merely by the increase in population.

Though the numerical increase in the deaths due to neoplasms of the lymphatic and haemopoietic system, and neoplasms of the lung is not detectable in statistics of neoplasms as a whole, it is noticeable when these two classes of neoplasms are considered separately.

Table IX—Deaths from Neoplasms of Lymphatic and Haematopoietic Tissues (Codes 200-205)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	180	136	316	103	78	90
1956	195	143	338	109	81	95
1957	193	150	343	106	83	95
1958	205	169	374	111	92	101
1959	212	168	380	113	90	101

RESPIRATORY DISEASE

During the year under review there was a significant increase in the number of deaths due to respiratory disease. The number of deaths due to pneumonia rose from 1,192 in 1958 to 1,561 in 1959, the increase of the rate per million of mean population being from 323 to 415.

A similar trend was noticeable in the deaths from bronchitis the number of which rose from 365 in 1958 to 494 in 1959. This represented a rise in the death rate from this cause from 99 to 131 per million of mean population.

There was also during the year under review a rise in the death rate from influenza. The number of deaths from this disease was 197 as against 18 in the previous year—a rise per million of mean population of from 5 to 52.

This increase in the death rate from influenza may have contributed, though it could not account wholly, for the increased number of deaths from respiratory diseases referred to above. The deaths from pneumonia and bronchitis represent an increase of approximately 30 per cent. in each case.

Table X—Deaths from Pneumonia (Codes 490-493)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	748	499	1,247	426	287	357
1956	763	544	1,307	427	307	368
1957	776	591	1,367	427	328	377
1958	713	479	1,192	385	260	323
1959	894	667	1,561	475	355	415

Deaths from Bronchitis (Codes 500-502)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	273	95	368	156	55	105
1956	293	89	382	164	50	107
1957	292	77	369	161	43	102
1958	279	86	365	151	47	99
1959	378	116	494	201	62	131

Deaths from Influenza (Codes 480-483)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	22	24	46	13	14	13
1956	16	15	31	9	8	9
1957	69	47	116	38	26	32
1958	11	7	18	6	4	5
1959	109	88	197	58	47	52

DEATHS FROM ACCIDENTS

The total number of deaths from motor vehicle accidents showed a steady rise from 806 in 1955 to 902 in 1959, the corresponding rates per million of mean population for the same years being 231 and 240.

Analysing these figures a little further shows that the death rate from motor vehicle accidents has risen rather more steeply among females than among males; 207 females died as the result of such accidents in 1959, representing a rate of 110 per million of mean population. This rate was equalled in 1956 but the actual number killed was less (194).

In contradistinction to the deaths from motor vehicle accidents, the death rate from all other accidents has shown a steady fall over the five years. In 1955 the number dying from accidents (other than motor vehicle accidents) was 1,195 and this has shown a steady fall to 1,062 in 1959. The rate per million has fallen over the five years from 342 to 283. The male rate over the five years has fallen from 455 to 383 and the female rate from 228 to 182 per million of mean population.

The general trend therefore is that the deaths due to motor vehicles are increasing and those from other causes are diminishing.

Table XI—Deaths from Motor Vehicle Accidents (Codes E810-E835)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	648	158	806	369	91	231
1956	609	194	803	341	110	226
1957	657	172	829	361	95	229
1958	659	181	840	356	98	227
1959	695	207	902	369	110	240

Deaths from All Other Accidents (Codes E800-E802, E840-E962)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	798	397	1,195	455	228	342
1956	764	419	1,183	428	237	333
1957	785	323	1,108	432	179	306
1958	617	300	917	333	163	248
1959	720	342	1,062	383	182	283

TUBERCULOSIS

The pattern of tuberculosis has changed considerably over the past ten or twelve years. Two factors have been responsible for the change, one is that a determined effort has been made to detect the disease in its earliest form by mass X-ray examinations, and the other is that therapeutic measures now available give a degree of control over the disease which was not possible before.

The number of new cases of tuberculosis notified in 1959 was 1,166, which was 233 less than for the previous year. Two-thirds of the far-advanced cases were discovered by hospitals and private practitioners and there has been a decrease in the number of moderately-advanced cases discovered in the mass chest X-ray examinations.

The Director of the Tuberculosis Division considers that a certain feeling of complacency is developing amongst the public, and a survey has been undertaken to ascertain whether the decrease in attendance at the X-ray centres is, in fact, due to complacency or to other reasons.

The death rate from all forms of tuberculosis over a five-year period, is shown in Table XII.

Table XII—Deaths from Tuberculosis (All Forms) (Codes 001-019)

Year	Number of Deaths			Rate per Million Mean Population		
	Males	Females	Persons	Males	Females	Persons
1955	186	66	252	106	38	73
1956	243	82	325	136	46	91
1957	196	52	248	107	29	68
1958	149	41	190	80	23	51
1959	179	45	224	95	24	59

POLIOMYELITIS

Hitherto notifications of cases of poliomyelitis have been accepted as such by the Department of Public Health unless the notifying doctor or hospital treating the patient cancelled the diagnosis. However, since the nation-wide Salk Vaccine Campaign was started, the histories and virological studies of reported cases have been reviewed by the Poliomyelitis Surveillance Committee in Melbourne and this Committee has considered that many of the cases reported were not actually poliomyelitis. The virological investigation of these cases has recently been greatly helped and speeded in New South Wales by the virological laboratory of the Institute of Clinical Pathology and Medical Research and that of the Royal Alexandra Hospital for Children.

In the year 1959 twenty-eight cases were notified. Three of these were cancelled soon after the notification was received and the remaining cases have been further reviewed, with the result that the cases of poliomyelitis accepted as such for the year 1959 now total 16.

Figures showing the incidence of poliomyelitis in New South Wales since 1916 are given in the following Table XIII.

Table XIII—Poliomyelitis—New South Wales

Year	Notified Cases	Deaths
1916	311	21
1932	384	44
1938	658	19
1944	668	47
1945	656	52
1948	87	5
1949	182	8
1950	789	55
1951	1,528	134
1952	414	42
1953	630	52
1954	555	29
1955	222	8
1956	240	16
1957	58	4
1958	23	..
1959	16	2

The number of notified cases between 1916 and 1948 are given at rather irregular intervals and accurate statistical conclusions could not be drawn from them. From 1948 onwards, however, the figures are given yearly and the trend of the disease is easily seen.

The peak year was 1951 with 1528 notified cases. A secondary peak is apparent in 1953, but the general trend is downwards. In 1956, inoculation of children with the Salk vaccine was commenced and the number who had received the three injections at the end of 1959 was 4,097,817.

The table shows that there has been a marked drop in the incidence of the disease following the inoculation campaign. As pointed out above the diagnostic standards insisted on before a case is classified as poliomyelitis are high. It is possible that previously some cases may have been incorrectly diagnosed, and so the figures quoted above could be in error, but even allowing for that, the lowering of the incidence of the disease has been striking.

DIPHTHERIA

Only 14 cases were reported during the year 1959, and this is the lowest total recorded; there were three deaths. In the previous year 28 cases were recorded and in that year one death occurred.

This reduction of the incidence of diphtheria is one of the greatest achievements of preventative medicine in New South Wales. In the days before immunisation had become generally adopted the maximum number of notifications in any one year was over seven thousand.

In his report for the year 1934 the then Director-General of Public Health made the following comments:—

> " It has been said that Australia has the highest incidence rate for diphtheria of any country in the world and according to the number of cases notified, it appears that this is so "; and later in the same report . . . .
>
> " Nevertheless the incidence is higher than it was thirty years ago and the death rate shows that the number of deaths per million from diphtheria has not decreased, that is to say that the danger of contracting a fatal attack of diphtheria is, if anything, a little higher than it was at the beginning of the century."

He said that the disease was preventable and made a plea for the more general adoption of immunisation.

TYPHOID FEVER

There were two cases of typhoid and nine of paratyphoid notified in 1959 as against 17 of typhoid and 10 of paratyphoid in the previous year. Of the two cases of typhoid one was of phage type J. Of the paratyphoid cases two were of paratyphoid A and two of B. No details are available of the others.

Over the years the incidence of typhoid has diminished to very small proportions. Thirty years ago the disease was quite common but at the present time many medical graduates complete their course without ever having seen a case.

SCARLET FEVER

During the year 1959, 478 cases of scarlet fever were notified, which represents a considerable reduction compared with the figures for the previous year, 703. No deaths were recorded in either year.

INFECTIOUS HEPATITIS

The incidence of infectious hepatitis remains high. Figures for the last two years are as follows: 1958—3,261 cases—17 deaths; 1959—3,183 cases—29 deaths.

Notifications are widespread throughout the State with occasional small localised epidemics. A comparison was made between the number of notifications from sewered as against non-sewered areas but no significant difference was detected.

TABLE XIV—CAUSES OF DEATH, NEW SOUTH WALES, 1959

International Code Number	Cause of Death	Number of Deaths			Rate per Million Mean Population		
		Males	Females	Persons	Males	Females	Persons
001–138	Infective and Parasitic Diseases	291	141	432	155	78	113
001–008	Tuberculosis of respiratory system	173	39	212	92	21	56
010	Tuberculosis of meninges and central nervous system	..	1	1	..	1	..
011–019	Tuberculosis, other forms	6	5	11	3	3	3
020–029	Syphilis and its sequelae	24	10	34	13	5	9
040–041	Typhoid and paratyphoid fever	..	1	1	..	1	..
045–048	Dysentery	1	1	2	1	1	1
050	Scarlet fever	..	..	..	..	..	..
052	Erysipelas	..	1	1	..	1	..
055	Diphtheria	1	2	3	1	1	1
056	Whooping cough	2	3	5	1	2	1
057	Meningococcal infections	8	12	20	4	6	5
061	Tetanus	10	3	13	5	2	3
080	Acute poliomyelitis	4	..	4	2	..	1
081	Late effects of acute poliomyelitis	1	2	3	1	1	1
082	Acute infectious encephalitis	8	4	12	4	2	3
083	Late effects of acute infectious encephalitis ..	2	1	3	1	1	1
085	Measles	6	7	13	3	4	3
092	Infectious hepatitis	10	19	29	5	10	8
Residual	Other infective and parasitic diseases	35	30	65	19	16	17
140–239	Neoplasms	2,709	2,345	5,054	1,440	1,250	1,345
140–199	Malignant neoplasms	2,464	2,128	4,592	1,309	1,134	1,222
200–205	Neoplasms of lymphatic and haematopoietic tissues	212	168	380	113	90	101
210–239	Other neoplasms	33	49	82	18	26	22
240–289	Allergic, Endocrine System, Metabolic and Nutritional Diseases	297	359	656	157	191	174
260	Diabetes mellitus	157	237	394	83	126	105
280–286	Avitaminoses and nutritional deficiency states ..	19	12	31	10	6	8
Residual	Other allergic, endocrine system, metabolic and nutritional diseases	121	110	231	64	59	61
290–299	Diseases of the Blood and Blood Forming Organs ..	64	93	157	34	50	42
300–326	Mental, Psychoneurotic and personality Disorders ..	105	53	158	56	28	42
330–398	Diseases of the Nervous System and Sense Organs..	2,291	2,888	5,179	1,217	1,538	1,378
	Vascular lesions affecting central nervous system—						
331	Cerebral Haemorrhage	865	1,186	2,051	460	632	546
332	Cerebral embolism and thrombosis	924	1,140	2,064	491	607	549
330, 333, 334	Other	303	379	682	161	202	181
340	Meningitis, except meningococcal and tuberculous	19	19	38	10	10	10

TABLE XIV—CAUSES OF DEATH, NEW SOUTH WALES, 1959—*continued*

International Code Number	Cause of Death	Number of Deaths			Rare per Million Mean Population		
		Males	Females	Persons	Males	Females	Persons
343	Encephalitis, myelitis and encephalo-myelitis, except acute infectious	6	4	10	3	2	3
341–342 344–398	Other disorders of the nervous system and sense organs	174	160	334	92	85	89
400–468	Diseases of the Circulatory System	8,305	5,905	14,210	4,412	3,146	3,781
400–416	Rheumatic fever and chronic rheumatic heart disease	134	154	288	71	82	77
420–422	Arteriosclerotic and degenerative heart disease	6,416	4,123	10,539	3,409	2,197	2,804
430–434	Other diseases of the heart	727	548	1,275	386	292	339
440–447	Hypertensive disease	537	667	1,204	285	355	320
450–456	Diseases of arteries	422	348	770	224	185	205
460–468	Diseases of veins and other diseases of circulatory system	69	65	134	37	35	36
470–527	Diseases of the Respiratory System	1,693	1,016	2,709	900	541	720
480–483	Influenza	109	88	197	58	47	52
490–493	Pneumonia	894	667	1,561	475	355	415
500–502	Bronchitis	378	116	494	201	62	131
470–475 510–527	Other diseases of the respiratory system	312	145	457	166	77	122
530–587	Diseases of the Digestive System	646	504	1,150	345	270	306
540–545	Diseases of stomach and duodenum	187	95	282	99	51	75
550–553	Appendicitis	41	18	59	22	10	16
560–561	Hernia of the abdominal cavity	35	39	74	19	21	20
570	Intestinal obstruction without mention of hernia	75	80	155	40	43	41
571	Gastro-enteritis and colitis except ulcerative, age four weeks and over	48	43	91	26	23	24
572	Chronic enteritis and ulcerative colitis	35	28	63	19	15	17
576–577	Peritonitis and peritoneal adhesions	5	11	16	3	6	4
581	Cirrhosis of liver	109	58	167	58	31	44
Residual	Other diseases of digestive system	111	132	243	59	70	65
590–637	Diseases of Genito-Urinary System	528	337	865	281	179	231
590–594	Nephritis and nephrosis	218	194	412	116	103	110
610–612	Diseases of the prostate	149	..	149	79	..	40
600–609 13–637	Other diseases of the genito-urinary system	161	143	304	86	76	81
640–689	Deliveries and Complications of Pregnancy Childbirth and Puerperium	..	54	54	..	30	13
640–649	Complications of pregnancy	..	16	16	..	9	4
650–652	Abortion—						
6502, 6512, 6522	Criminal	..	9	9	..	5	2
Residual	Other	..	5	5	..	3	1
670–678	Complications of delivery	..	13	13	..	7	3
680–689	Complications of puerperium	..	11	11	..	6	3
690–716	Diseases of the Skin and Cellular Tissue	13	33	46	7	18	12
720–749	Diseases of the Bones and Organs of Movement	43	64	107	23	34	28
750–759	Congenital Malformations	236	198	434	125	106	115
760–776	Certain Diseases of Early Infancy	651	446	1,097	346	238	292
760, 761	Injury at birth	174	129	303	92	69	81
762	Post-natal asphyxia and atelectasis	78	35	113	41	19	30
776	Immaturity unqualified	260	187	447	138	100	119
763–775	Other diseases of early infancy	139	95	234	74	51	62
780–795	Symptoms, senility and ill-defined conditions	218	261	479	116	139	127
794	Senility without mention of psychosis	162	232	394	86	124	105
780–793, 795	Other symptoms and ill-defined conditions	56	29	85	30	15	23
E800—E999	Accidents, poisonings and violence	1,767	695	2,462	939	370	654
E800—E962	Accidents	1,415	549	1,964	752	293	522
E970—E979, E963	Suicide and self-inflicted injury	314	123	437	167	66	116
E964, E965 E980—E999	Homicide and operations of war	38	23	61	20	12	16
001—E999	All Causes	19,857	15,392	35,249	10,553	8,206	9,373

CAUSES OF DEATH OF INFANTS UNDER ONE YEAR OF AGE, NEW SOUTH WALES, 1959

International Code Number	Cause of Death	Number of Deaths			Rate per 1,000 Live Births		
		Males	Females	Persons	Males	Females	Persons
001–019	Tuberculosis	1	..	1	.02	..	.01
020–029	Syphilis and its sequelae	..	1	1	..	.03	.01
057	Meningococcal infections	2	7	9	.05	.18	.11
080–081	Poliomyelitis	..	..	..	..	..	..
082–083	Infectious encephalitis	..	..	..	..	..	..
030–056, 058–074, 084–138	Other infective and parasitic diseases	7	12	19	.17	.30	.24
340	Meningitis, except meningococcal and tuberculous	7	7	14	.17	.18	.17
490–493	Pneumonia (age 4 weeks and over)	88	65	153	2.13	1.64	1.89
500–502	Bronchitis	13	6	19	.31	.15	.24
571	Gastro-enteritis and colitis, except ulcerative, age four weeks and over.	21	14	35	.51	.35	.43
750–759	Congenital malformations	171	147	318	4.14	3.72	3.93
7600–7610	Injury at birth, without mention of immaturity	94	68	162	2.28	1.72	2.00
7605–7615	Injury at birth, with immaturity	80	61	141	1.94	1.54	1.74
7620	Post-natal asphyxia and atelectasis, without mention of immaturity.	38	24	62	.92	.61	.77
7625	Post-natal asphyxia and atelectasis with immaturity	40	11	51	.97	.28	.63
7630	Pneumonia of newborn, without mention of immaturity	24	15	39	.58	.38	.48
7635	Pneumonia of newborn, with immaturity	2	4	6	.05	.10	.07
7640	Diarrhoea of newborn, without mention of immaturity	1	..	1	.02	..	.01
7645	Diarrhoea of newborn, with immaturity	..	..	..	..	..	..
7650, 7660, 7670, 7680, 7690–7694, 7700–7702, 7710, 7720, 7730.	Other diseases of early infancy, without mention of immaturity.	56	40	96	1.36	1.01	1.19
7655, 7665, 7675, 7685, 7695–7699, 7705–7707, 7715, 7725, 7735.	Other diseases of early infancy with immaturity	46	33	79	1.11	.83	.98
774	Immaturity with mention of any other subsidiary condition.	10	3	13	.24	.08	.16
776	Immaturity unqualified	260	187	447	6.29	4.73	5.53
E800–E999	Accidents, poisonings and violence	33	17	50	.80	.43	.62
Residual	All other causes	64	52	116	1.55	1.31	1.44
001–E999	All Causes	1,058	774	1,832	25.61	19.57	22.65

SECTION I

A. Communicable Diseases, 1959

NOTIFIABLE INFECTIOUS DISEASES RECORDED IN NEW SOUTH WALES DURING THE YEARS 1957, 1958 AND 1959, UNDER PUBLIC HEALTH ACT, 1902-1952

The Public Health Act, 1902-1952, provides that the Governor may by proclamation in the *Government Gazette*, declare that any disease named therein is an infectious disease.

Disease	Notifiable from—	Cases and Deaths Notified					
		1957*		1958*		1959*	
		Cases	Deaths	Cases	Deaths	Cases	Deaths
Smallpox	20th December, 1881	..	..	..	..	..	..
Leprosy	26th November, 1890	..	..	3	1	1	..
Typhoid and Paratyphoid Fevers	1st January, 1898	6	..	17	1	2	1
		6	1	10	..	9	..
Scarlet Fever	1st January, 1898	485	..	703	..	478	..
Diphtheria or Membranous Group	1st January, 1898	56	3	28	1	14	3
Plague	23rd January, 1900†	..	..	..	..	..	..
Acute Anterior Poliomyelitis	1st February, 1912‡	58	4	23	..	16	2
Meningococcal Infection	11th October, 1915†	97	26	72	20	75	20
Virus Encephalitis	1st April, 1926†	19	8	25	7	25	12
Cholera	12th August, 1927	..	..	..	..	..	..
Typhus Fever	12th August, 1927	2	1	5	..	2	..
Yellow Fever	12th August, 1927	..	..	..	..	..	..
Puerperal Infection	16th August, 1929†	46	7	54	9	56	11
Brucellosis	13th August, 1937†	16	..	23	1	7	..
Tuberculosis (All Forms)	14th May, 1945§	1,649	248	1,399	190	1,166	224
Infantile Diarrhoea	11th July, 1952	212	40	193	38	237	52
Rheumatic Fever	11th July, 1952	106	14	105	15	59	1
Chorea (Rheumatic)	11th July, 1952	4	..	6	..	3	..
Ancylostomiasis	11th July, 1952	71	..	20	1	37	2
Dengue Fever	11th July, 1952	..	..	..	..	..	..
Ornithosis	11th July, 1952	..	..	..	..	2	1
Leptospirosis	11th July, 1952	10	..	18	..	9	..
Ascariasis	22nd January, 1954	44	1	33	..	58	1
Infectious Hepatitis	22nd January, 1954	2,400	27	3,261	17	3,183	29
Staphylococcal Mastitis	19th September, 1958	Not Notifiable		6	..	38	..
Staphylococcal Pneumonia	19th September, 1958	Not Notifiable		6	2	97	44
Staphylococcal Diseases in infants under 4 weeks of age	19th September, 1958	Not Notifiable		5	..	201	11
Totals	..	5,287	380	6,015	303	5,775	414
Population as at 31st December	..	3,660,497		3,725,686		3,790,270	

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* Classified according to the Seventh (1958) Revision of the International List.

† Definition reproclaimed 11th July, 1952.

‡ Definition reproclaimed 14th August, 1931, and 11th July, 1952. Cases and deaths shown are those notified during the year.

§ Pulmonary Tuberculosis has been notifiable as follows:—(*a*) From 1904, City of Sydney only; (*b*) From 1915, Metropolitan and Hunter River Districts; (*c*) From 1916, Blue Mountains Districts added; (*d*) From March, 1929, notification was extended to cover the whole State. On 14th May, 1945, extra-pulmonary tuberculosis was made notifiable.

Note:—Diseases notifiable prior to 1902 were notifiable under the following Acts: Infectious Diseases (Smallpox) Supervision Act, 1881: Leprosy Act, 1890; Public Health Act, 1896.

General

A total of 5,775 cases of infectious disease was notified under the Public Health Act during 1959, or 240 less than in 1958, but with fewer notifications there were 111 more deaths, and these occurred predominately under Tuberculosis (+ 35), Staphylococcal Infections (+ 55) and Infantile Diarrhoea (+ 14).

Pulmonary Tuberculosis

Notified cases amounted to 1,166, a decrease of 233 on the 1958 figure. There were 224 deaths during the year, an increase of 35.

Infectious Hepatitis

There were 3,183 notified cases with 29 deaths, in contrast to 3,261 and 17 deaths in 1958.

Venereal Diseases

Cases notified under the Venereal Diseases Act, 1918, amounted to Syphilis 379 (58·4 per cent. increase), Gonorrhoea 2,292 (12·3 per cent. increase).

Acute Anterior Poliomyelitis

Only 16 cases of the above disease were notified in 1959 with 2 deaths. This is a further reduction of 7 cases on the 1958 figures (23 cases). The Poliomyelitis Vaccination Campaign has been responsible for these encouraging figures over the past few years.

TABLE I—NOTIFIABLE INFECTIOUS DISEASES—CASES AND DEATHS BY SEX AND AGE, EACH HEALTH DISTRICT, 1959

Age Group	Ancylostomiasis						Ascariasis						Brucellosis						Chorea (rheumatic)						Diphtheria						Infantile Diarrhoea					
	Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
METROPOLITAN HEALTH DISTRICT																																				
All Ages	..	..	..	..	..	..	18	8	26	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	70	50	120	7	7	14
Under 1 Year	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	55	37	92	5	6	11
1-4 Years	..	..	..	..	..	..	7	5	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	14	13	27	2	1	3
5-14 Years	..	..	..	..	..	..	2	2	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	8	..	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..
HUNTER RIVER HEALTH DISTRICT																																				
All Ages	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	3	3	6	..	1	1	5	4	9	3	2	5
Under 1 year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	1	6	3	..	3
1-4 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	..	1	1	..	3	3	..	2	2
5-14 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SOUTH COAST HEALTH DISTRICT																																				
All Ages	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	6	3	9	4	1	5
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	6	2	1	3
1-4 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	2	..	2
5-14 Years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
RICHMOND-TWEED HEALTH DISTRICT																																				
All Ages	11	17	28	1	..	1	4	7	11	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	3	1	4	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	..	..	..
1-4 Years	7	6	13	1	..	1	4	6	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..
5-14 Years	1	10	11	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE I—NOTIFIABLE INFECTIOUS DISEASES—CASES AND DEATHS BY SEX AND AGE, EACH HEALTH DISTRICT, 1959—*continued*

Age Group	Ancylostomiasis						Ascariasis						Brucellosis						Chorea (Rheumatic)						Diphtheria						Infantile Diarrhoea					
	Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
MITCHELL HEALTH DISTRICT																																				
All Ages	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	2	..	2
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	2	..	2
1-4 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
BROKEN HILL DISTRICT																																				
All Ages	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
REMAINDER OF STATE (Including Armed Forces and Imported Cases)																																				
All Ages	5	4	9	1	..	1	10	11	21	..	1	1	..	4	4	..	..	..	..	1	1	..	..	..	1	5	6	1	1	2	55	37	92	18	8	26
Under 1 Year	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1	1	2	35	25	60	12	8	20
1-4 Years	4	..	4	1	..	1	8	7	15	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	20	12	32	6	..	6
5-14 Years	1	3	4	..	..	..	1	3	4	..	..	..	..	1	1	..	..	..	..	1	1	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
WHOLE STATE																																				
All Ages	16	21	37	2	..	2	32	26	58	..	1	1	3	4	7	..	..	..	.	3	3	..	..	..	5	9	14	1	2	3	141	96	237	34	18	52
Under 1 Year	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	1	1	2	103	67	170	24	15	39
1-4 Years	11	6	17	2	..	2	19	18	37	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	3	2	5	..	1	1	37	29	66	10	3	13
5-14 Years	2	13	15	..	..	..	3	6	9	..	..	..	1	1	2	..	..	..	..	3	3	..	..	..	..	3	3	..	..	..	..	..	..	..	..	..
15-24 Years	..	1	1	..	..	..	8	..	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
25-34 Years	1	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
35-44 Years	1	..	1	..	..	..	..	..	..	..	..	..	1	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	1	1	2	..	..	..	..	1	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..

TABLE I—NOTIFIABLE INFECTIOUS DISEASES—CASES AND DEATHS BY SEX AND AGE, EACH HEALTH DISTRICT, 1959—*continued*

Age Group	Acute Anterior Poliomyelitis						Rheumatic Fever						Scarlet Fever						Tuberculosis						Typhoid Fever						Typhus Fever					
	Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths		
	M.	F	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
METROPOLITAN HEALTH DISTRICT																																				
All Ages	12	3	15	2	..	2	8	10	18	..	..	..	83	111	194	..	..	..	511	247	758	121	24	145	..	1	1	..	..	..	..	2	2	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	1	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	6	2	8	..	..	..	1	..	1	..	..	..	25	35	60	..	..	..	8	13	21	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	1	..	1	..	..	..	5	7	12	..	..	..	51	71	122	..	..	..	3	4	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	1	1	2	..	..	..	1	3	4	..	..	..	5	4	9	..	..	..	31	18	49	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	4	..	4	2	..	2	1	..	1	..	..	..	..	1	1	..	..	..	66	58	124	2	1	3	..	1	1	..	..	..	..	1	1	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	81	49	130	11	7	18	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	105	46	151	22	4	26	..	..	..	..	..	..	..	1	1	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	111	37	148	34	2	36	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	105	21	126	51	10	61	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
HUNTER RIVER HEALTH DISTRICT																																				
All Ages	..	..	..	..	..	..	..	..	..	..	..	..	6	15	21	..	..	..	47	23	70	13	8	21	..	..	..	..	..	..	..	..	..	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	..	..	..	..	..	..	2	3	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	..	..	..	..	..	..	4	10	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	5	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	12	2	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	6	13	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	2	10	3	3	6	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	2	13	3	2	5	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	5	10	7	2	9	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SOUTH COAST HEALTH DISTRICT																																				
All Ages	..	..	..	..	..	..	2	2	4	..	..	..	12	16	28	..	..	..	57	18	75	10	2	12	..	..	..	..	..	..	..	..	..	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	..	..	..	..	..	..	4	2	6	..	..	..	3	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	2	1	3	..	..	..	6	12	18	..	..	..	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	1	1	..	..	..	2	..	2	..	..	..	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	9	5	14	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	8	5	13	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	3	17	3	..	3	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	..	10	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	3	10	5	1	6	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
RICHMOND-TWEED HEALTH DISTRICT																																				
All Ages	..	..	..	..	..	..	3	5	8	..	..	..	6	9	15	..	..	..	13	4	17	3	1	4	..	..	..	..	..	..	..	..	..	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	..	..	..	..	..	..	1	4	5	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	2	4	6	..	..	..	5	5	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	3	2	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	6	..	6	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Table I—Notifiable Infectious Diseases—Cases and Deaths by Sex and Age, each Health District, 1959—*continued*

Age Group	Acute Anterior Poliomyelitis						Rheumatic Fever						Scarlet Fever						Tuberculosis						Typhoid Fever						Typhus Fever					
	Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
MITCHELL HEALTH DISTRICT																																				
All Ages	..	1	1	..	..	..	4	4	8	..	..	..	22	34	56	..	..	..	20	15	35	3	4	7	..	1	1	..	1	1	..	..	..	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	..	1	1	..	..	..	..	..	..	..	..	..	7	7	14	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	3	4	7	..	..	..	14	27	41	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2	3	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	7	..	1	1	..	1	1	..	1	1	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	5	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	3	11	3	..	3	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
BROKEN HILL DISTRICT																																				
All Ages	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	5	2	7	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
REMAINDER OF STATE (Including Armed Forces and Imported Cases)																																				
All Ages	..	..	..	..	..	..	10	9	19	..	1	1	67	97	164	..	..	..	136	68	204	28	5	33	..	..	..	..	..	..	..	..	..	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	1	4	5	..	..	..	19	24	43	..	..	..	4	5	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	7	5	12	..	1	1	43	62	105	..	..	..	4	1	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	2	..	2	..	..	..	1	5	6	..	..	..	11	8	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	15	12	27	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3	..	..	..	27	13	40	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	29	14	43	5	1	6	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	19	5	24	5	2	7	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	26	10	36	17	2	19	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
WHOLE STATE																																				
All Ages	12	4	16	2	..	2	28	31	59	..	1	1	196	282	478	..	..	..	789	377	1,166	179	45	224	..	2	2	..	1	1	..	2	2	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	3	1	4	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	6	3	9	..	..	..	2	4	6	..	..	..	58	75	133	..	..	..	16	20	36	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	1	..	1	..	..	..	20	22	42	..	1	1	123	187	310	..	..	..	10	6	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	1	1	2	..	..	..	3	4	7	..	..	..	9	9	18	..	..	..	49	33	82	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	4	..	4	2	..	2	2	1	3	..	..	..	2	3	5	..	..	..	106	81	187	4	1	5	..	1	1	..	..	..	..	1	1	..	..	..
35-44 Years	..	..	..	..	..	..	1	..	1	..	..	..	2	3	5	..	..	..	126	76	202	11	10	21	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	168	69	237	34	9	43	..	1	1	..	1	1	..	1	1	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	155	47	202	44	8	52	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	153	43	196	85	16	101	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	..	..	3	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE I—NOTIFIABLE INFECTIOUS DISEASES—CASES AND DEATHS BY SEX AND AGE, EACH HEALTH DISTRICT, 1959—*continued*

Age Group	Virus Encephalitis						Infectious Hepatitis						Leptospirosis						Meningococcal Infection						Paratyphoid Fever						Puerperal Fever	
	Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases	Deaths
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	F.	F.
METROPOLITAN HEALTH DISTRICT																																
All Ages	4	5	9	1	2	3	539	501	1040	4	8	12	..	...	...	..	...	..	20	17	37	5	3	8	5	3	8	..	..	..	15	5
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	11	1	2	3	..	..	..	..	..	..	..	..
1-4 Years	1	1	2	..	..	..	14	18	32	..	..	..	..	..	..	..	..	..	14	4	18	3	..	3	..	..	..	..	..	..	..	..
5-14 Years	1	1	2	..	1	1	244	198	442	1	..	1	..	..	..	..	..	..	..	4	4	..	..	..	1	..	1	..	..	..	..	..
15-24 Years	1	..	1	..	..	..	99	109	208	..	1	1	..	..	..	..	..	..	1	1	2	1	..	1	2	1	3	..	..	..	5	2
25-34 Years	..	2	2	..	1	1	92	98	190	..	2	2	..	..	..	...	..	..	..	1	1	..	..	..	..	1	1	..	..	..	6	1
35-44 Years	1	1	2	1	..	1	44	43	87	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	2	2
45-54 Years	..	..	..	..	..	..	15	14	29	..	1	1	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	12	11	23	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..
65 Years and Over	..	..	..	..	..	..	9	7	16	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	10	3	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
Ornithosis and Psittacosis—1 case																																
HUNTER RIVER HEALTH DISTRICT																																
All Ages	..	..	..	..	..	..	90	100	190	2	3	5	..	1	1	..	..	..	2	4	6	2	1	3	..	..	..	..	..	..	3	1
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	3	4	7	..	..	..	..	..	..	..	..	..	..	4	4	..	1	1	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	41	53	94	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	12	18	30	1	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
25-34 Years	..	..	..	..	..	..	14	15	29	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
35-44 Years	..	..	..	..	..	..	8	3	11	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
45-54 Years	..	..	..	..	..	..	4	2	6	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	4	1	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over	..	..	..	..	..	..	..	2	2	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	4	2	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SOUTH COAST HEALTH DISTRICT																																
All Ages	2	1	3	..	1	1	125	103	228	..	1	1	..	..	..	..	..	..	3	2	5	1	2	3	..	..	..	..	..	..	4	2
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3	..	2	2	..	..	..	..	..	..	..	..
1-4 Years	1	1	2	..	1	1	7	2	9	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..	..	..
5-14 Years	..	..	..	..	..	..	52	54	106	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	22	12	34	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
25-34 Years	..	..	..	..	..	..	21	22	43	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
35-44 Years	..	..	..	..	..	..	10	6	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	8	4	12	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	4	1	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over	1	..	1	..	..	..	1	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
RICHMOND-TWEED HEALTH DISTRICT																																
All Ages	2	1	3	1	1	2	45	31	76	1	1	2	6	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	2
Under 1 Year	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	..	1	1	..	1	1	1	3	4	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	1	..	1	1	..	1	18	14	32	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	6	2	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
25-34 Years	1	..	1	..	..	..	9	7	16	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2
35-44 Years	..	..	..	..	..	..	4	4	8	..	..	..	4	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	.	..	..	..	..	..	4	1	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..

TABLE I—NOTIFIABLE INFECTIOUS DISEASES—CASES AND DEATHS BY SEX AND AGE, EACH HEALTH DISTRICT, 1959—*continued*

Age Group	Virus Encephalitis						Infectious Hepatitis						Leptospirosis						Meningococcal Infection						Paratyphoid Fever						Puerperal Fever	
	Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases	Deaths
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	F.	F.
MITCHELL HEALTH DISTRICT																																
All Ages	1	..	1	..	..	..	181	180	361	..	1	1	..	..	..	..	..	..	1	2	3	..	1	1	..	..	..	..	..	..	4	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	1	1	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	10	7	17	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	1	..	1	..	..	..	96	97	193	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	33	27	60	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
25-34 Years	..	..	..	..	..	..	20	26	46	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
35-44 Years	..	..	..	..	..	..	10	10	20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	3	6	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	1	3	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over	..	..	..	..	..	..	5	2	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	3	2	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
BROKEN HILL DISTRICT																																
All Ages	1	..	1	1	..	1	22	17	39	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Under 1 Year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	3	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 Years	1	..	1	1	..	1	12	9	21	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	3	3	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 Years	..	..	..	..	..	..	3	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 Years	..	..	..	..	..	..	1	3	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
REMAINDER OF STATE (Including Armed Forces and Imported Cases)																																
All Ages	6	2	8	5	..	5	664	585	1249	3	5	8	2	..	2	..	..	..	10	14	24	..	5	5	1	..	1	..	..	..	24	1
Under 1 Year	..	..	..	..	..	..	2	1	3	..	..	..	..	..	..	..	..	..	2	3	5	..	2	2	..	..	..	..	..	..	..	..
1-4 Years	..	..	..	..	..	..	22	27	49	..	..	..	..	..	..	..	..	..	2	3	5	..	1	1	..	..	..	..	..	..	..	..
5-14 Years	3	2	5	2	..	2	264	248	512	..	1	1	..	..	..	..	..	..	3	5	8	..	..	..	..	..	..	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	108	106	214	..	..	..	..	..	..	..	..	..	1	1	2	..	1	1	1	..	1	..	..	..	9	1
25-34 Years	..	..	..	..	..	..	142	111	253	1	1	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..
35-44 Years	1	..	1	1	..	1	60	42	102	..	1	1	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	1	..
45-54 Years	1	..	1	1	..	1	20	20	40	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 Years	1	..	1	1	..	1	13	9	22	..	1	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
65 Years and Over	..	..	..	..	..	..	17	10	27	1	1	2	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	16	11	27	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	..
Ornithosis and Psittacosis—1 Case. Death 1 male aged 45-54 years.																																
WHOLE STATE																																
All Ages	16	9	25	8	4	12	1,666	1,517	3,183	10	19	29	9	..	9	..	..	..	36	39	75	8	12	20	6	3	9	..	..	..	56	11
Under 1 Year	..	..	..	..	..	..	3	1	4	1	..	1	..	..	..	..	..	..	10	12	22	2	7	9	..	..	..	..	..	..	..	..
1-4 Years	2	3	5	..	2	2	60	62	122	..	..	..	1	..	1	..	..	..	17	11	28	4	2	6	..	..	..	..	..	..	..	..
5-14 Years	7	3	10	4	1	5	737	673	1,410	2	2	4	1	..	1	..	..	..	4	10	14	..	..	..	1	..	1	..	..	..	..	..
15-24 Years	..	..	..	..	..	..	273	277	550	1	2	3	1	..	1	..	..	..	2	2	4	1	1	2	3	1	4	..	..	..	20	3
25-34 Years	1	..	1	..	1	1	301	280	581	1	5	6	1	..	1	..	..	..	..	1	1	..	..	..	..	1	1	..	..	..	15	5
35-44 Years	3	3	6	2	..	2	137	111	248	..	3	3	4	..	4	..	..	..	1	1	2	..	..	..	1	1	2	..	..	..	4	[illegible]
45-54 Years	1	..	1	1	..	1	54	47	101	1	2	3	..	..	..	..	..	..	1	..	1	1	1	2	..	..	..	..	..	..	..	..
55-64 Years	1	..	1	1	..	1	35	25	60	1	2	3	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1	..	..	..	..	..
65 Years and Over	1	..	1	..	..	..	32	23	55	3	3	6	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	34	18	52	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17	..

TABLE I—NOTIFIABLE INFECTIOUS DISEASES—CASES AND DEATHS BY SEX AND AGE, EACH HEALTH DISTRICT, 1959—*continued*

Age Group	Staph. Pneumonia						Staph. Pneumonia						Staph. Mastitis						Staph. Diseases in Infants under 4 Weeks of Age											
	Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths			Cases			Deaths		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
	METROPOLITAN HEALTH DISTRICT						MITCHELL HEALTH DISTRICT						METROPOLITAN AREA						METROPOLITAN AREA						BROKEN HILL HEALTH DISTRICT					
All Ages	26	30	56	9	11	20	1	..	1	1		1	..	11	11	..	..	..	48	47	95	5	1	6	1	..	1	..	..	..
Under 1 year	6	4	10	2	2	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 years	2	1	3	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 years	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 years	2	8	10	..	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 years	1	4	5	..	2	2	1	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 years	2	6	8	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 years	5	3	8	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 years	3	3	6	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 years and over	4	1	5	4	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	HUNTER RIVER HEALTH DISTRICT						REMAINDER OF STATE						SOUTH COAST HEALTH DISTRICT						HUNTER RIVER HEALTH DISTRICT						SOUTH COAST HEALTH DISTRICT					
All Ages	4	4	8	3	2	5	9	10	19	5	7	12	..	12	12	..	..	..	19	13	32	1	2	3	17	12	29	1	1	2
Under 1 year	1	2	3	1	1	2	4	6	10	2	4	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 years	1	1	2	1	..	1	2	..	2	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 years	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 years	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 years	1	..	1	1	..	1	1	1	2	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 years	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 years and over	..	1	1	..	1	1	1	1	2	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	SOUTH COAST HEALTH DISTRICT						WHOLE OF N.S.W.						REMAINDER OF STATE						MITCHELL HEALTH DISTRICT						REMAINDER OF STATE					
All Ages	6	4	10	3	1	4	48	49	97	22	22	44	..	15	15	..	..	..	..	2	2	..	..	..	23	14	37	..	..	..
Under 1 year	1	2	3	1	1	2	12	15	27	6	9	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 years	2	..	2	1	..	1	7	2	9	5	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 years	1	1	2	1	..	1	2	1	3	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 years	..	..		..	..	..	2	9	11	..	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 years	1	..	1	..	..	..	3	5	8	1	3	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 years	1	1	2	..	..	..	3	7	10	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 years	..	..	..	..	..	..	9	4	13	3	2	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 years	..	..	..	..	..	..	4	3	7	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 years and over	..	..	..	..	..	..	5	3	8	4	2	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	RICHMOND-TWEED HEALTH DISTRICT												TOTAL ALL N.S.W.						RICHMOND-TWEED HEALTH DISTRICT						TOTAL ALL N.S.W.					
All Ages	2	1	3	1	1	2	..	..	..	..	..	..	..	38	38	..	..	..	4	1	5	..	..	..	112	87	201	7	4	11
Under 1 year	..	1	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1-4 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5-14 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15-24 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-34 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35-44 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45-54 years	2	..	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55-64 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 years and over	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE II—SUMMARY, 1959

District	Estimated Population 30th June, 1959	Ancylostomiasis		Ascariasis		Brucellosis		Chorea (Rheumatic)		Diphtheria		Infantile Diarrhoea		Virus Encephalitis		Infectious Hepatitis		Leptospirosis		Meningococcal Infection		Paratyphoid Fever		Puerperal Fever	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D
Metropolitan Health District	1,913,240	..	..	26	..	1	..	..	..	2	..	120	14	9	3	1,040	12	..	..	37	8	8	..	15	5
Hunter River Health District	305,880	..	..	..	..	1	..	..	..	6	1	9	5	..	..	190	5	1	..	6	3	..	..	3	1
South Coast Health District	299,380	..	..	..	..	1	..	1	..	..	..	9	5	3	1	228	1	..	..	5	3	..	..	4	2
Richmond-Tweed Health District	124,350	28	1	11	..	..	..	1	..	..	..	4	..	3	2	76	2	6	..	..	..	..	..	6	2
Mitchell Health District	138,390	..	..	..	..	..	..	..	..	..	..	3	2	1	..	36	1	..	..	3	1	..	..	4	..
Broken Hill District	33,420	..	..	..	..	..	..	..	..	..	..	..	..	1	1	39	..	..	..	..	..	..	..	..	..
Remainder of State	941,715	9	1	21	1	4	..	1	..	6	2	92	26	8	5	1,236	7	2	..	24	5	1	..	24	1
Residence Outside State		..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	..	..	..	..	..	..	..
Armed Forces	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	..	..	..	..	..	..	..	..	..
Total—New South Wales	3,756,375	37	2	58	1	7	..	3	..	14	3	237	52	25	12	3,183	29	9	..	75	20	9	..	56	11

District	Estimated Population 30th June, 1959	Acute Anterior Poliomyelitis		Rheumatic Fever		Scarlet Fever		Tuberculosis		Typhoid Fever		Typhus Fever		Leprosy		Ornithosis and Psittacosis		Staphylococcal Pneumonia		Staphylococcal Mastitis		Staphylococcal Disease in Infants Under 4 Weeks of Age	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Metropolitan Health District	1,913,240	15	2	18	..	194	..	758	145	1	..	2	..	1	..	1	..	56	20	11	..	95	6
Hunter River Health District	305,880	..	..	..	..	21	..	70	21	..	..	..	..	..	..	..	..	8	5	..	..	32	3
South Coast Health District	299,380	..	..	4	..	28	..	75	12	..	..	..	..	..	..	..	..	10	4	12	..	29	2
Richmond-Tweed Health District	124,350	..	..	8	..	15	..	17	4	..	..	..	..	..	..	..	..	3	2	..	..	5	..
Mitchell Health District	138,390	1	..	8	..	56	..	35	7	1	1	..	..	..	..	..	..	1	1	..	..	2	..
Broken Hill District	33,420	..	..	2	..		..	7	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Remainder of State	941,715	..	..	19	1	164	..	204	33	..	..	..	..	..	..	1	1	19	12	15	..	37	..
Residence Outside State	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Armed Forces	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total—New South Wales	3,756,375	16	2	59	1	478	..	1,166	224	2	1	2	..	1	..	2	1	97	44	38	..	201	11

DIVISION OF EPIDEMIOLOGY—ANNUAL REPORT, 1959

STAFF:

Director: H. C. Johnston, M.B., B.S., D.P.H. Medical officers: 2. Clinic attendants: 8. Clerical attendants: 5.

FUNCTIONS OF DIVISION

These comprise two main sections:—

(1) Work concerned with the proclaimed infectious diseases within the meaning of the Public Health Act.

(2) Venereal diseases.

Work under Section 1 includes the recording, compilation and follow-up of notifications received under the Public Health Act; preparation of routine and special reports on the notifiable infectious diseases and the exchange of epidemiological information within the States, Commonwealth and overseas health authorities.

The main portion of the work of the Division is concerned with venereal diseases. The Division conducts the Government clinic (for males only), which is also the treatment centre in Sydney for seamen under the Brussels International Agreement (1924). Under the direction of the Commissioner, Venereal Diseases Act, the Division administers that Act; it records the notifications received, takes action against defaulters from treatment, supervises the records of hospital clinics, supplies educative propaganda and acts as an information and statistical centre.

VENEREAL DISEASES IN 1959

Statistics concerned with the administration of the Venereal Diseases Act, 1918, follow this introduction.

The year was notable for the first significant increase in the incidence of syphilis reported for many years. The number of notified cases of gonorrhoea also increased by 12·3 per cent.

Features of the increased syphilis incidence (58·4 per cent. over the figure for 1958), were:—

(1) The high proportion of early infectious cases (77·3 per cent.).

(2) Eighty-eight per cent. of the early infections were in males.

(3) Positive dark-field examinations in the Divisional Clinic numbered 159, compared with 55 in 1958—an increase of 189 per cent.

(4) Over 40 per cent. of early infections were contracted from professional prostitutes.

Over 91 per cent. of the total cases reported were from the Metropolitan area but, as the following table shows, the increase, unlike the 78·3 per cent. increase reported in New York City for fiscal 1959, was not marked in the teen-age group.

Age Group	1958 No. of Cases	1959 No. of Cases	Per cent. Increase
Years			
15-24	56	70	25.0
25-29	37	65	75·6
30-34	25	48	92·0
35-39	20	41	105·0
40-49	22	40	81·8
50-59	6	21	250·0

The incidence of venereal diseases reported by the Armed Services was much the same as in 1958 (the following figures are included in the hospital statistics in Table V):—

	Armed Forces Total V.D. Reported
1958	182
1959	176

The incidence of non-gonococcal urethritis seen in the Divisional Clinic is shown for 3 years:—

	1957	1958	1959
No. of cases	1,209	1,258	1,298

Venereal Diseases Act, 1918—Report on Notifications Received during the Year ended 31st December, 1959

Two thousand eight hundred and twenty-three notifications of venereal disease were received during the year 1959, which total was an increase of 421 as compared with the previous year.

Of the total notifications, 92·8 per cent. came from the metropolitan area.

Notifications from private practitioners amounted to 18·9 per cent. of the total, compared with 20·8 per cent. in 1958 and 24·6 per cent. in 1957.

SYPHILIS

There were 379 notifications of syphilis (318 males and 61 females), a figure 145 above that for the previous year. The sex ratio was 5·2 males to 1 female.

Of the patients notified 16·4 per cent. were being treated privately, as compared with 8·5 per cent. in 1958 and 20·7 per cent. in 1957.

Syphilis contributed 13·4 per cent. of the total notifications, as compared with 9·7 per cent. in 1958 and 9·7 per cent. in 1957.

Of the syphilis infections notified, 293 (77·3 per cent.) were early infections, as compared with 166 (70·9 per cent.) in 1958 and 134 (55·6 per cent.) in 1957.

The notifications of syphilis gave an incidence of 10·04 per 100,000 of mean population, as compared with 6·34 in 1958 and 6·65 in 1957.

GONORRHOEA

Of the total notifications received during the year, 2,292 were for gonorrhoea (2,060 males and 232 females), which was a figure 268 above that for the previous year. The sex ratio was 8·9 males to 1 female.

The notifications received from private practitioners amounted to 19·2 per cent. of the total gonorrhoea, as compared with 23·0 per cent. in 1958 and 26·3 per cent. in 1957.

The percentage of gonorrhoea in the total notifications of venereal disease received during 1959 was 81·2 per cent. as compared with 84·3 per cent. in 1958 and 85·1 per cent. in 1957.

The notifications of gonorrhoea gave an incidence of 60·73 per 100,000 of mean population, as compared with 54·09 in 1958 and 58·18 in 1957.

Other Forms of Venereal Disease	1957	1958	1959
Soft Chancre (Chancroid)	7	2	5
Gonococcal Ophthalmia	Nil	Nil	2
Venereal Warts	120	129	118
Gleet	2	13	27
Lymphogranuloma Ven.	Nil	Nil	Nil

During 1959 the names and addresses of 1,016 defaulters (965 males and 51 females) were notified. This figure was 100 above that for the previous year.

Because of inaccurate information given by patients, or because of failure to notify change of address, 363 (35·7 per cent.) " follow up " letters were returned unclaimed.

The following table shows the percentage of defaulters who remained permanent defaulters:—

Year	Total Defaulters Reported	Resumed Treatment, Died, Left State, or Not Finalised	Remained in Default	Percentage Remaining in Default	Percentage of Total V.D. Notifications
1955	470	281	189	40·2	10·5
1956	857	538	319	37·2	16·0
1957	946	598	348	36·8	14·4
1958	916	623	293	32·0	12·2
1959	1,016	670	346	34·0	12·3

PROSECUTIONS

During the year summonses to appear before a Magistrate were issued against 466 persons for breach of Section 5 of the Act (failure to continue under treatment). Five males were arrested and completed treatment after being placed on verbal recognisance.

CLINICS

Attendances at clinics for males totalled 47,861 (96·0 per cent. of this total being attendances at the clinic in the Division of Epidemiology, Sydney), as compared with 45,285 in 1958 and 47,479 in 1957.

At the clinics for females the attendances were 2,407 (78·2 per cent. of this total being at the Special Clinic at the Rachel Forster Hospital for Women and Children, Sydney), as compared with 2,183 in 1958 and 2,043 in 1957.

The sex ratio of attendances at clinics was 19·8 males to 1 female.

Metropolitan District

Nine clinic centres are available (Royal North Shore Hospital clinic having ceased). Of these, one centre provides for males only and one for females only.

Prophylactic facilities for males are available continuously at the clinic in the Division of Epidemiology, Albert Street, Sydney, and 21,867 prophylactic treatments were given during the year 1959.

Newcastle District

The clinics at the Royal Newcastle Hospital provided 95·9 per cent. of the notifications of venereal diseases from the Newcastle District. Prophylactic facilities are available at the Hospital.

District General Hospitals

Treatment is available at Country General Hospitals.

Bed Accommodation

Beds are available in the metropolitan area as required. There is very little demand, nor need, for bed accommodation.

PATHOLOGICAL EXAMINATIONS

During 1959 the Pathological Laboratories carried out 77,874 serologic tests for venereal disease.

Smears examined for the presence, or otherwise, of gonococci totalled 3,121. In addition, 2,990 smears were examined in the Division of Epidemiology.

Four hundred and ninety-seven examinations were made for treponema pallida (497 in the Division of Epidemiology) as compared with 307 for the previous year.

The following Tables are appended:—

Table I—Notifications received during 1959 arranged in order of district from which notifications come.

Table II—Return of cases of venereal disease notified during 1959 showing forms of disease and age and sex of patients.

Table IIA—Syphilis: Age-sex grouping by stage of disease.

Table III—Summary of attendances at the ten clinics during 1959.

Table IV—12-year comparison of total cases and cases reported for failure to continue treatment.

Table V—3-year comparison of notifications received from private practitioners as compared with public hospitals and ten clinics.

Table VI—Monthly return of cases of venereal disease notified during year.

Table I—Notifications received during 1957 to 1959, arranged in Order of Districts

	Metropolitan Area						Newcastle District						Remainder of State					
	1957		1958		1959		1957		1958		1959		1957		1958		1959	
Gonorrhoea	M.1,737 F. 183	1,920	M.1,713 F. 163	1,876	M.1,935 F. 217	2,152	M. 125 F. 4	129	M. 100 F. 10	110	M. 73 F. 5	78	M. 50 F. 9	59	M. 35 F. 3	38	M. 52 F. 10	62
Syphilis	M. 151 F. 54	205	M. 167 F. 55	222	M. 290 F. 57	347	M. 11 F. 2	13	M. 10 F. 2	12	M. 19 F. 1	20	M. 15 F. 8	23	......		M. 9 F. 3	12
Soft Chancre	M. 7 F. ..	7	M. 2 F. ..	2	M. 5 F. ..	5	....		....		....		....		....		....	
Gleet	M. 1 F. ..	1	....		....		M. 1 F. ..	1	M. 13 F. ..	13	....		....		....		M. 27 F. ..	27
Ven. Warts	M. 119 F. 1	120	M. 129 F. ..	129	M. 116 F. 1	117	....		....		....		....		....		M. 1 F. ..	1
Gon. Ophthalmia ..	....		....		M. 1 F. ..	1	....		....		....		....		....		M. .. F. 1	1
Lymphogran. Ven.	....		....				....		....		....		....		....		....	
Totals	M.2,015 F. 238	2,253	M.2,011 F. 218	2,229	M.2,347 F. 275	2,622	M. 137 F. 6	143	M. 123 F. 12	135	M. 92 F. 6	98	M. 65 F. 17	82	M. 35 F. 3	38	M. 89 F. 14	103

TABLE II—RETURN OF CASES OF VENEREAL DISEASE NOTIFIED DURING 1959 SHOWING FORMS OF DISEASE AND AGE AND SEX OF PATIENT

Diseases	0–14		15–24		25–29		30–34		35–39		40–49		50–59		60–69		70 and over		Age unknown		Totals		Grand Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Gonorrhoea	..	10	939	124	459	24	278	26	164	22	159	16	45	7	14	3	2	..	..	..	2,060	232	2,292
Syphilis	..	4	62	25	69	10	55	4	42	3	44	6	30	5	11	2	4	2	1	..	318	61	379
Soft Chancre	..	..	1	..	2	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	5	..	5
Gleet	..	..	2	..	12	..	6	..	5	..	1	..	1	..	..	..	..	..	..	..	27	..	27
Ven. Warts	..	..	62	1	22	..	18	..	10	..	2	..	2	..	1	..	..	..	..	..	117	1	118
Gon. Ophthalmia	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
Lymphogran. Ven.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	15	1,067	150	564	34	358	30	222	25	206	22	78	12	26	5	6	2	1	..	2,528	295	2,823

TABLE IIA—SYPHILIS—AGE-SEX GROUPING BY STAGE OF DISEASE

Classification of Diseases	0–14		15–24		25–29		30–34		35–39		40–49		50–59		60–69		70 +		Unknown		Totals		Grand Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Primary	..	1	50	2	54	2	40	1	32	1	32	..	17	1	2	..	1	..	1	..	229	8	237
Secondary..	..	1	2	6	4	1	3	1	3	..	2	3	3	..	..	..	..	1	..	..	17	13	30
Latent 1st year	..	..	3	7	3	1	2	1	3	2	3	..	..	..	1	..	..	..	..	..	15	11	26
Cardio-vascular	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	1	..	..	..	4	..	4
C.N.S.	..	..	..	..	..	..	..	..	1	..	..	1	2	1	2	1	..	..	..	..	5	3	8
All other late and latent ..	..	..	4	9	6	4	7	1	3	..	4	2	4	3	4	1	2	1	..	..	34	21	55
Treated	..	..	2	..	1	1	2	..	..	..	2	..	4	..	..	..	..	..	..	..	11	1	12
Congenital under 1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Congenital over 1	..	..	1	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	5
Relapse	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	4	62	25	69	10	55	4	42	3	44	6	30	5	11	2	4	2	1	..	318	61	379

Table III — Table showing Annual Attendance Returns at Public Clinics for Treatment of Venereal Disease — 1957, 1958 and 1959, inclusive

Year	Attendances			New Cases					
				Gonorrhoea			Syphilis		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
HEALTH DEPARTMENT CLINIC									
1957	45,749	..	45,749	1,124	..	1,124	85	..	85
1958	43,700	..	43,700	1,083	..	1,083	117	..	117
1959	45,938	..	45,938	1,272	..	1,272	202	..	202
ROYAL PRINCE ALFRED HOSPITAL									
1957	216	35	251	25	3	28	7	5	12
1958	479	71	550	32	3	35	7	..	7
1959	622	140	762	70	1	71	14	5	19
SYDNEY HOSPITAL									
1957	563	140	703	75	4	79	13	6	19
1958	342	32	374	93	7	100	8	2	10
1959	525	31	556	96	4	100	30	3	33
ROYAL ALEXANDRA HOSPITAL FOR CHILDREN									
1957	21	4	25	..	..	..	1	..	1
1958	2	6	8	..	..	..	..	..	..
1959	3	6	9	..	..	..	..	..	..
ROYAL SOUTH SYDNEY HOSPITAL									
1957	12	1	13	2	1	3	..	..	..
1958	8	..	8	3	..	3	..	..	..
1959	4	1	5	4	1	5	..	..	..
ROYAL NORTH SHORE HOSPITAL									
1957	84	43	127	3	..	3	2	2	4
1958	20	18	38	..	..	..	2	..	2
1959				Clinic discontinued.					
ROYAL NEWCASTLE HOSPITAL									
1957	756	216	972	77	3	80	5	4	9
1958	706	377	1,083	65	8	73	4	1	5
1959	701	317	1,018	71	4	75	7	2	9
RACHEL FORSTER HOSPITAL FOR WOMEN									
1957	..	1,599	1,599	..	84	84	..	12	12
1958	..	1,678	1,678	..	86	86	..	22	22
1959	..	1,891	1,891	..	107	107	..	21	21
PARRAMATTA DISTRICT HOSPITAL									
1957	70	..	70	..	..	..	..	..	..
1958	21	..	21	1	..	1	1	..	1
1959	57	28	85	5	2	7	3	1	4
ST. GEORGE HOSPITAL, KOGARAH									
1957	7	4	11	2	..	2	..	..	..
1958	5	1	6	2	..	2	..	..	..
1959	11	3	14	1	..	1	..	..	..
BALMAIN and DISTRICT HOSPITAL									
1957	1	1	2	..	..	..	..	..	..
1958	2	..	2	..	..	..	..	..	..
1959	..	..	..	..	..	..	..	..	..
TOTALS									
1957	47,479	2,043	49,522	1,308	95	1,403	113	29	142
1958	45,285	2,183	47,468	1,279	104	1 383	139	25	164
1959	47,861	2,407	50,268	1,519	119	1,638	256	32	288

TABLE IV

Year	Syphilis	Gonorrhoea	Other Venereal Diseases	Total	Cases Reported for Failure to Continue Treatment				
					Total No. Reported	Letters returned Unclaimed	Treatment Resumed	Cases not Finalised as at 31st December	Deceased, Left State, etc.
1938	942	4,844 (Highest since 1923)	410	6,196 (Highest since 1923)	1,843 M. 1,532 F. 311	712 M. 602 F. 110	882 M. 732 F. 150	120 M. 72 F. 48	29 M 26 F. 3
1949	1,053	1,836	174	3,063	958 M. 815 F. 143	329 M. 279 F. 50	587 M. 499 F. 88	25 M. 22 F. 3	17 M. 15 F. 2
1950	627	1,657	169	2,453	821 M. 730 F. 91	253 M. 217 F. 36	536 M. 485 F. 51	23 M. 20 F. 3	9 M. 8 F. 1
1951	443	1,179	139	1,761	776 M. 679 F. 97	274 M. 234 F. 40	472 M. 418 F. 54	24 M. 22 F. 2	6 M. 5 F. 1
1952	486	1,078	82 (Lowest)	1,646	593 M. 527 F. 66	238 M. 209 F. 29	342 M. 306 F. 36	10 M. 10 F. ..	3 M. 2 F. 1
1953	317	1,324	102	1,743	559 M. 515 F. 44	245 M. 218 F. 27	297 M. 281 F. 16	14 M. 13 F. 1	3 M. 3 F. ..
1954	255	1,042 (Lowest)	110	1,407 (Lowest)	371 M. 352 F. 19 (Lowest)	176 M. 165 F. 11	180 M. 172 F. 8	13 M. 13 F. ..	2 M. 2 F. ..
1955	275	1,398	124	1,797	470 M. 446 F. 24	182 M. 170 F. 12	271 M. 261 F. 10	7 M. 7 F. ..	10 M. 8 F. 2
1956	240	1,584	103	1,927	857 M. 801 F. 56	299 M. 274 F. 25	503 M. 477 F. 26	20 M. 19 F. 1	35 M. 31 F. 4
1957	241	2,108	129	2,478	946 M. 883 F. 63	271 M. 252 F. 19	599 M. 559 F. 40	25 M. 24 F. 1	51 M. 48 F. 3
1958	234 (Lowest)	2,024	144	2,402	916 M. 878 F. 38	217 M. 212 F. 5	567 M. 554 F. 13	23 M. 20 F. 3	33 M. 30 F. 3
1959	379	2,292	152	2,823	1,016 M. 965 F. 51	363 M. 336 F. 27	629 M. 605 F. 24	17 M. 14 F. 3	25 M. 24 F. 1

Table V—Notifications Received 1957-59 from Public Clinics, Hospitals, and Private Practitioners

Disease	Public Hospitals and Departmental Clinic			Private Practitioner		
	1957	1958	1959	1957	1958	1959
Gonorrhoea	1,552 M. 1,442	1,558 M. 1,433	1,852 M 1,692	306 M. 270	466 M. 415	440 M. 368
	F. 110	F. 125	F. 160	F. 36	F. 51	F. 72
Syphilis	191 M. 143	214 M. 162	317 M. 269	50 M. 34	20 M. 15	62 M. 49
	F. 48	F. 52	F. 48	F. 16	F. 5	F. 13
Other Forms of V.D. ..	125 M. 124	131 M. 130	119 M. 117	4 M. 4	13 M. 13	33 M. 33
	F. 1	F. 1	F. 2	F. ..	F. ..	F. ..
Totals	1,868 M. 1,709	1,903 M. 1,725	2,288 M. 2,078	360 M. 308	499 M. 443	535 M. 450
	F. 159	F. 178	F. 210	F. 52	F. 56	F. 85

TABLE VI—MONTHLY RETURN OF CASES OF VENEREAL DISEASES NOTIFIED DURING 1959

Disease		January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Gonorrhoea	Male	159	190	189	149	128	228	173	126	169	124	220	205	2,060	2,292
	Female	22	29	21	16	23	25	9	16	13	16	28	14	232	
Syphilis	Male	14	10	31	57	20	27	12	21	24	37	40	25	318	379
	Female	1	4	3	3	4	6	6	5	8	2	6	13	61	
Soft Chancre	Male	....	....	....	....	....	1	....	1	....	1	1	1	5	5
	Female	....	....	....	....	....	....	....	....	....	....	....	....	....	
Gleet	Male	3	5	2	4	4	2	2	....	1	2	2	....	27	27
	Female	....	....	....	....	....	....	....	....	....	....	....	....	....	
Ven. Warts	Male	10	7	12	7	9	4	10	7	16	16	9	10	117	118
	Female	....	....	....	....	....	....	....	....	....	1	....	....	1	
Gon. Opthalmia	Male	....	....	1	....	....	....	....	....	....	....	....	....	1	2
	Female	....	....	....	1	....	....	....	....	....	....	....	....	1	
Lymphogran. Ven.	Male	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Female	....	....	....	....	....	....	....	....	....	....	....	....	....	
Totals	Male	186	212	235	217	161	262	197	155	210	180	272	241	2,528	
	Female	23	33	24	20	27	31	15	21	21	19	34	27	295	
		209	245	259	237	188	293	212	176	231	199	306	268	2,823	2,823

POLIOMYELITIS VACCINATION CAMPAIGN, N.S.W.—ANNUAL REPORT, 1959

Director: Dr. E. S. A. Meyers.

Staff: Clerks, 2; Shorthand Typist, 1; Office Assistant, 1; Packers, 2.

The Poliomyelitis Vaccination Campaign continued very satisfactorily throughout 1959 During this year, 213,705 persons, children and adults, received their first dose of the vaccine, 216,184 received their second dose, and 338,078 received their third dose; so that in all a total of 869,910 injections of the vaccine were given.

Over the three and a half year period of the Campaign in New South Wales, from its commencement in July, 1956, to the end of 1959, 1,465,477 persons have received their first dose of the vaccine, 1,421,459 have received their second dose, and 1,210,881 have received their third dose, making a total of 4,097,817 injections given. Over this three and a half year period, a total of 4,344,972 doses of the vaccine was issued to Councils and other bodies undertaking the vaccinations. The excess of 247,155 doses of vaccine issued, over doses of vaccine actually given, represents a loss of vaccine for all reasons of some 5·7 per cent.—a not unreasonable margin in a campaign of this magnitude.

During 1959, 30 cases were notified to the Board of Health as poliomyelitis or suspected poliomyelitis. Of these notifications, three were cancelled soon after they were received, as being not cases of poliomyelitis. The remaining 27 cases were further reviewed and reports on the clinical findings and virological and serological examinations were submitted to the Surveillance Committee in Canberra. Of these 27 cases considered by the Committee, 11 were regarded as not being cases of poliomyelitis, so that the final number of notified cases of poliomyelitis accepted and confirmed by the Committee for the year 1959 was 16.

Of the 16 confirmed cases of poliomyelitis, 15 had not been vaccinated. Only one case of confirmed poliomyelitis occurred in a person known to have had previous vaccination, a child of four years of age who developed only a mild paralysis of one leg. This child had had two injections, some nine months previously.

The continued interest and co-operation of the Councils and other bodies which have carried on the actual vaccination programmes, and of the Red Cross Blood Transfusion Service which has undertaken the preparation of the sterilised equipment required, must be here acknowledged. The work of these organisations has contributed very largely to the success of the Campaign.

Statistical tables showing details of vaccinations carried out during 1959, with comparative figures for previous years, are appended.

Department of Public Health, N.S.W.— Poliomyelitis Vaccination Campaign

Table I — Progress Totals of Persons given First Injection of Poliomyelitis Vaccine by Year of Birth since commencement of Campaign in New South Wales

Month	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
1956—July-December	11,383	22,259	26,492	29,814	31,040	35,176	34,381	33,704	33,599	33,868
1957—January-December	5,450	14,035	19,081	20,991	23,193	26,677	28,760	28,784	29,352	30,548
1958—January-December	..	734	804	1,105	1,002	1,303	1,273	1,363	1,371	1,612
1959—January	..	3	6	8	23	18	15	25	23	17
February	..	7	8	35	37	60	61	52	45	77
March	..	..	21	28	40	39	41	52	54	64
April	..	..	17	29	35	36	35	35	45	50
May	..	..	9	21	20	29	28	41	36	48
June	..	..	12	28	20	47	47	52	52	49
July	..	..	19	16	25	37	39	37	46	41
August	..	..	29	56	80	87	115	112	130	121
September	..	..	45	67	93	120	111	112	137	120
October	..	..	..	30	80	79	86	90	94	119
November	..	..	..	32	45	60	63	84	80	97
December	..	..	..	15	14	16	14	25	22	36
Totals	16,833	37,038	46,543	52,275	55,747	63,784	65,069	64,568	65,086	66,867

Table I — Progress Totals of Persons given First Injection of Poliomyelitis Vaccine by Year of Birth since commencement of Campaign in New South Wales — *continued*

Month	1951	1952	1953	1954	1955	1956	1957	1958	1959	Others	Total
1956—July-December	32,162	31,478	30,690	28,825	28,415	12,860	..	..	..	8,183	464,329
1957—January-December	29,168	28,235	27,825	28,211	28,081	38,458	12,292	..	..	18,858	437,999
1958—January-December	2,128	3,241	3,606	4,138	4,915	9,863	40,740	18,190	..	252,056	349,444
1959—January	28	41	38	49	59	85	207	979	..	3,087	4,711
February	106	160	193	194	237	435	1,151	6,082	..	14,241	23,181
March	71	121	118	146	197	350	980	4,424	1	13,157	19,904
April	56	95	115	120	155	314	758	4,068	323	7,996	14,282
May	62	85	85	109	147	256	624	4,403	837	7,453	14,293
June	92	145	172	176	299	420	897	4,276	1,830	9,121	17,735
July	57	82	117	114	121	198	495	2,547	2,123	6,747	12,861
August	192	265	308	338	415	564	1,063	3,754	4,295	17,116	29,040
September	173	220	260	341	348	544	1,048	2,833	4,704	17,409	28,685
October	130	207	240	286	305	459	848	2,480	4,476	16,602	26,611
November	93	140	173	244	239	346	583	1,451	3,873	9,384	16,987
December	35	40	49	56	77	87	153	371	1,198	3,207	5,415
Totals	64,553	64,555	63,989	63,347	64,010	65,239	61,839	55,858	23,660	404,617	1,465,477

Table II — Progress Totals of Persons given Second Injection of Poliomyelitis Vaccine by Year of Birth since commencement of Campaign in New South Wales

Month	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
1956—July-December	9,721	18,989	22,500	25,445	26,171	29,003	27,957	27,629	27,338	26,748
1957—January-December	6,033	15,938	21,890	24,462	27,256	32,173	34,526	34,327	35,250	36,499
1958—January-December	..	903	943	1,119	1,168	1,428	1,442	1,432	1,497	1,766
1959—January	..	4	8	14	12	14	10	13	10	22
February	..	15	10	23	18	16	22	22	31	24
March	..	..	14	37	38	54	59	55	49	69
April	..	..	22	29	39	45	46	50	56	64
May	..	..	17	16	28	26	31	28	39	42
June	..	..	6	28	24	33	30	35	38	59
July	..	..	9	27	22	45	49	51	48	48
August	..	..	15	19	19	33	32	35	37	38
September	..	..	29	48	79	91	103	103	121	120
October	..	..	..	56	95	114	101	116	148	132
November	..	..	..	37	80	86	91	95	91	124
December	..	..	..	23	42	55	55	68	64	77
Totals	15,754	35,849	45,463	51,383	55,091	63,216	64,554	64,059	64,817	65,832

Table II — Progress Totals of Persons given Second Injection of Poliomyelitis Vaccine by Year of Birth since commencement of Campaign in New South Wales — *continued*

Month	1951	1952	1953	1954	1955	1956	1957	1958	1959	Others	Total
1956—July-December	24,339	22,084	21,084	19,495	19,396	7,354	..	..	..	5,713	360,966
1957—January-December	36,150	36,238	36,384	36,442	35,869	42,081	10,581	..	..	16,562	518,661
1958—January-December	2,247	3,422	3,791	4,301	4,845	10,326	40,069	15,793	..	229,156	325,648
1959—January	29	38	49	67	71	130	395	1,053	..	8,062	10,001
February	43	61	63	59	100	137	346	1,218	..	5,852	8,060
March	85	117	150	174	269	363	905	4,757	..	15,678	22,873
April	79	123	132	156	185	324	782	4,654	1	13,859	20,646
May	47	72	100	107	141	204	598	3,273	279	7,069	12,117
June	73	98	101	123	165	272	778	4,371	770	8,485	15,489
July	86	121	163	183	227	374	804	4,083	1,661	8,516	16,517
August	57	71	120	102	116	216	502	2,364	1,627	6,022	11,425
September	160	238	272	287	337	497	1,051	3,912	4,437	17,682	29,567
October	203	258	269	345	368	556	1,001	2,773	3,909	16,368	26,812
November	131	224	241	284	321	468	854	2,569	4,330	15,577	25,603
December	83	137	158	201	225	325	569	1,401	3,713	9,878	17,074
Totals	63,812	63,302	63,077	62,326	62,635	63,627	59,235	52,221	20,727	384,479	1,412,459

Table III — Progress Totals of Persons given Third Injection of Poliomyelitis Vaccine by Year of Birth since commencement of Campaign in New South Wales

	1941	1942	1943	1944	1945	1946	1947	1948
No. of Children resident in N.S.W. according to year of birth*	52,500	54,100	57,100	61,700	63,200	69,900	73,100	69,700
Month								
1956—July-December	..	..	..	..	..	..	..	..
1957—January-December	6,801	17,321	24,725	27,164	30,598	35,615	34,735	33,319
1958—January-December	7,143	14,424	17,797	21,490	21,484	24,212	26,033	26,880
1959—January	..	9	6	14	11	17	11	15
February	..	117	96	135	135	167	170	190
March	..	100	89	124	137	201	195	203
April	..	128	240	184	151	210	216	214
May	..	75	52	79	93	121	132	126
June	..	54	51	88	90	93	110	112
July	..	40	51	87	79	97	93	96
August	..	37	56	91	78	84	86	70
September	..	28	38	44	57	62	55	64
October	..	..	41	42	61	54	56	71
November	..	..	37	43	50	61	62	72
December	..	..	9	10	33	34	24	31
Totals	13,944	32,333	43,288	49,595	53,057	61,028	61,978	61,463

Table III — Progress Totals of Persons given Third Injection of Poliomyelitis Vaccine by Year of Birth since commencement of Campaign in New South Wales — *continued*

	1949	1950	1951	1952	1953	1954	1955	1956
No. of Children resident in N.S.W. according to year of birth*	70,400	71,600	72,000	73,100	73,300	72,900	73,900	18,100
Month								
1956—July-December	..	..	..	..	..	..	..	..
1957—January-December	33,088	32,729	30,478	28,215	26,267	24,608	23,782	12,264
1958—January-December	27,983	28,817	28,697	30,045	30,678	30,815	31,174	38,864
1959—January	28	113	32	47	34	127	52	123
February	192	222	295	426	475	562	623	1,347
March	230	270	344	513	566	622	753	1,573
April	203	252	322	460	487	547	584	1,261
May	119	142	209	292	260	332	355	893
June	121	151	182	241	265	301	357	786
July	112	133	148	227	246	294	315	675
August	89	113	122	199	203	231	282	454
September	71	76	103	157	204	218	240	403
October	61	89	103	139	196	197	251	352
November	73	64	91	147	165	183	231	404
December	32	42	62	99	120	113	141	191
Totals	62,402	63,213	61,188	61,207	60,166	59,150	59,140	59,590

Table III—Progress Totals of Persons given Third Injection of Poliomyelitis Vaccine by Year of Birth since commencement of Campaign in New South Wales—*continued*

	1957	1958	1959	Others	Third Injection	Second Injection	First Injection	Grand Total	Amount of Vaccine Issued
No. of Children resident in N S.W. according to year of birth*	78,400	79,400	80,000	..	..	..	..	..	..
Month									
1956—July-December	..	..	..	..	..	360,966	464,329	825,295	841,804
1957—January-December	213	..	..	4,327	426,249	518,661	437,999	1,382,909	1,424,618
1958—January-December	20,630	350	..	19,038	446,554	325,648	349,444	1,121,646	1,217,640
1959—January	513	51	..	543	1,746	10,001	4,711	16,458	19,470
February	5,819	771	..	1,874	13,616	8,060	23,181	44,857	51,830
March	6,101	1,183	..	5,778	18,982	22,873	19,904	61,759	70,180
April	5,017	2,592	..	30,462	43,530	20,646	14,282	78,458	89,640
May	3,428	1,831	..	38,548	47,087	12,117	14,293	73,497	84,280
June	2,794	2,639	..	44,240	52,675	14,489	17,735	85,899	96,380
July	2,411	3,065	..	43,138	51,307	16,517	12,861	80,685	89,930
August	1,434	1,440	..	20,222	25,291	11,425	29,040	65,756	72,270
September	1,319	2,116	..	17,972	23,227	29,567	28,685	81,479	90,990
October	1,117	2,811	..	17,743	23,384	26,812	26,611	76,807	84,280
November	1,105	4,491	..	16,372	23,651	25,603	16,987	66,241	72,580
December	549	2,680	60	9,352	13,582	17,074	5,415	36,071	39,080
Totals	52,450	26,020	60	269,609	1,210,881	1,421,459	1,465,477	4,097,817	4,344,972

*Estimated as at 31st December, 1959.

TABLE IV — PROGRESSIVE TOTALS OF PERSONS VACCINATED IN METROPOLITAN AND COUNTRY AREAS

Month	Metropolitan				Country			
	First Injections	Second Injections	Third Injections	Total	First Injections	Second Injections	Third Injections	Total
1956—July-December	304,378	250,074	....	554,452	159,951	110,892	....	270,843
1957—January-December	131,577	175,520	253,584	560,681	306,422	343,141	172,665	822,228
1958—January-December	147,139	137,484	166,887	451,510	202,305	188,164	279,667	670,136
1959—January	4,422	5,737	1,398	11,557	289	4,264	348	4,901
February	15,319	5,866	7,241	28,426	7,862	2,194	6,375	16.431
March	10,256	14,740	8,523	33,519	9,648	8,133	10,459	28,240
April	4,870	10,665	13,732	29,267	9,412	9,981	29,798	49,191
May	5,637	4,063	14,160	23,860	8,656	8,054	32,927	49,637
June	8,718	6,958	20,320	35,996	9,017	8,531	32,355	49,903
July	5,438	7,450	23,927	36,815	7,423	9,067	27,380	43,870
August	19,320	5,181	11,861	36,362	9,720	6,244	13,430	29,394
September	16,197	18,137	11,433	45,767	12,488	11,430	11,794	35,712
October	14,654	16,032	15,604	46,290	11,957	10,780	7,780	30,517
November	9,860	13,887	15,309	39,056	7,127	11,716	8,342	27,185
December	3,289	9,800	9,534	22,623	2,126	7,274	4,048	13,448
Totals	701,074	681,594	573,513	1,956,181	764,403	739,865	637,368	2,141,636

B. Public Health Administration

REPORT OF THE GOVERNMENT ANALYST FOR THE YEAR ENDED 31st DECEMBER, 1959

Government Analyst: Ernest Samuel Ogg, B.Sc. (Hons.), A.R.A.C.I.

Deputy Government Analyst: William Frank Fisher, A.S.T.C., A.R.A.C.I.

The work carried out by the Branch embraces the following:—

Analyses of food and its control under the Pure Food Act.

Analyses of blood and urine samples for alcohol and toxic gases, and blood samples in suspected drowning cases.

Analyses of biological specimens, gases, dusts in connection with occupational health.

Analyses of drugs for hospital use and in connection with drug control under the Poisons Act and the Police Offences Act (Drugs of Addiction).

Analyses of waters, sewerage and trade wastes.

Miscellaneous analyses in connection with Government Stores—covering fuels, lubricating oils and greases, paints, soaps, disinfectants, inks, etc.

Analyses of post-mortem specimens for coronial enquiries.

Miscellaneous analyses in connection with criminal investigation work.

General

The number of samples examined during the year totalled 25,015 distributed as follows, the figures for the year ending 31st December, 1958, being tabled for comparison:—

Authority	Samples examined	
	1958	1959
Pure Food Act—		
Milk	10,913	11,581
Meats	7,340	7,857
Smallgoods	279	353
Other Foods	1,445	1,148
Total	19,977	20,939
Public Services of the State—		
Subsidised Institutions	452	471
Government Stores Department	690	526
Police Authorities	354	334
Coroner's Enquiries	1,426	1,356
State Municipal and Departmental Authorities—Waters	739	541
State Municipal and Departmental Authorities—Sewages	310	231
Division of Occupational Health	737	307
Department of Prisons	58	44
Department of Labour and Industry and Social Welfare	11	14
Miscellaneous Authorities	312	252
	25,066	25,015

Activities

MILK

11,581 samples of milk were examined for the purposes of the Pure Food Act, an increase of 668 over the previous year's figures. These comprised 4,208 samples collected in the Metropolitan area, 1,682 in country districts and 5,691 samples collected on behalf of the Milk Board.

3·8 per cent. of the milks submitted by the Milk Board failed to meet the standards of the Pure Food Act, whilst of the remaining samples, 3·0 per cent. of those collected in the Metropolitan area and 10·74 per cent. of those collected in country districts contravened the standard. Of all samples taken 4·55 per cent. were adulterated.

Particulars of samples taken and adulterations are outlined below:—

District of Collection	Metropolitan Area		Country Districts		Milk Board		Total	
Number of Milk Samples collected ..	4,208		1,682		5,691		11,581	
	No.	per cent.	No.	per cent.	No.	per cent.	No.	per cent.
Number and Proportion of Adulterations Found—								
Deficient in milk fat	45	1·07	116	6·88	68	1·20	229	1·98
Containing added water	71	1·65	53	3·15	137	2·41	261	2·25
Deficient in milk fat and containing added water	12	0·28	12	0·71	11	0·19	35	0·32
Total Adulterations	128	3·00	181	10·74	216	3·80	525	4·55

MILK PRODUCTS

394 samples of cream were examined. Of these, 3 samples contained foreign fat. The rest were in conformity.

MEAT AND MEAT PRODUCTS

The number of meat samples examined increased 517 over the previous year's figures. 55 samples of sausages contained excess fat, as against only 9 samples in 1958. Of the minced meat samples examined, approximately 10 per cent. contained sulphur dioxide as a preservative. This percentage remains remarkably constant throughout the years.

GENERAL FOODS

Bread

Only 3 samples of protein-enriched bread were found to be deficient in protein, as against 44 in the year 1958. This was undoubtedly due to the improvement in wheat quality during 1959.

Artificial Colour in Food

Only 3 instances of illegal colouring matter being used in food were encountered during the year.

Olive Oil

3 samples out of 20 olive oil samples examined were found to contain peanut oil.

Spirits

Spirits are still the subject of close scrutiny. Of 210 samples submitted, 55 contained added water and 16 were not true to the brand stated. A number of these have been the subject of keenly contested legal proceedings, all of which have ended in favour of the Department.

Vinegar

A survey of vinegar on sale in the Metropolitan area revealed no instances of adulteration.

Drinks, Non-alcoholic

Of 200 summer drinks examined, 2 contained saccharin in contravention of regulations and 4 were deficient in fruit juice content. One variety of drink contained quinine as a bitter principle and its presence was not declared.

Wine

Two samples of wine were found to be watered. These were the first instances of this offence for some years.

Details of samples taken under the Pure Food Act and particulars of adulterations are listed in Table I.

SUBSIDISED INSTITUTIONS

471 samples were analysed for subsidised institutions, comprising body fluids and tissues, foodstuffs, drugs, etc.

GOVERNMENT STORES DEPARTMENT

Government Stores Department submitted 526 samples for examination comprising foodstuffs, paints, drugs, soaps and detergents, disinfectants and insecticides, lubricants and a great variety of miscellaneous items in use by the Public Service and semi-governmental institutions throughout the State.

WATERS, SEWERAGES, ETC.

541 samples of water and 231 samples of sewage and trade effluents were examined in connection with water treatment plants, sewage treatment works, private water supplies, public and private swimming pools, discharge of factory effluent into public water courses, A revival of interest into fluoridation of water resulted in a number of fluoride determinations on country water supplies.

OCCUPATIONAL HEALTH

The Division of Occupational Health, formerly Industrial Hygiene, submitted 307 specimens of biological fluids, dusts, air, etc., in connection with hazards in industry.

CRIMINAL INVESTIGATION

334 exhibits in connection with criminal investigations were submitted on behalf of the Police Department. A table showing the nature of the exhibits and the attendant charges is attached under Table II. This type of work offers scope for considerable work of an investigational and research nature. Unfortunately, staff difficulties up to the present have reduced this work to a comparatively minor quantity.

CORONIAL ENQUIRIES

1,356 exhibits were examined in connection with Coronial Enquiries. A table showing details of the results of these investigations is included in Table III.

Barbiturates still head the list of positive findings, while straight chain ureides were found in 18 cases, much the same as last year. This also applies to the older poisons arsenic and strychnine. Thallium was responsible for three deaths and parathion for 10 deaths.

419 specimens of blood and 34 of urine were submitted for alcoholic content from the subjects of coronial enquiries. The results of these analyses are tabulated below. As pointed out in last year's report, nothing significant can be inferred from these results, as in most cases no history of drinking, etc., is available.

Alcoholic Content mg/100 ml.	Blood	Urine
Negative	177	..
0–50	56	8
51–100	38	3
101–150	48	1
151–200	31	2
201–250	24	4
251–300	19	1
301–350	8	4
351–400	10	4
More than 400	8	7
Total	419	34

In addition, 38 samples of blood were examined for carbon monoxide content and 7 blood samples were examined in connection with suspected drowning.

STAFF

The shortage of staff has continued, particularly in graduate and near graduate stage. The effect of this has been that very little necessary research and investigation work has been carried out and that while the actual number of samples examined shows little variation, the actual work carried out on the samples has had to be drastically cut and the quality of the work has to some extent suffered.

TABLE I—PARTICULARS OF SAMPLES EXAMINED IN CONNECTION WITH THE PURE FOOD ACT

Nature of Sample	No. Examined	No. Adulterated	Particulars of Adulteration
Apple	1	..	......
Apple Juice	1	..	......
Bananas	3	..	......
Banana Essence	1	..	......
Beer	54	..	......
Biscuits	3	..	......
Bread, Brown	16	..	......
Bread, White	132	3	Deficient protein
Breakfast Foods	5	..	......
Butter	8	..	......
Cakes	5	..	......
Caviar	3	..	......
Cheese	4	..	......
Chicken and Vegetable Roll	2	..	......
Chinese Food	11	..	......
Cocoa Beans	1	..	......
Coconut	4	..	......
Coffee	5	..	......
Colouring Matter for Foods	1	..	......
Confectionery	6	..	......
Crayons	3	..	......
Cream, Milk Board	258	..	......
Cream, Pure Food	136	3	Sample was not cream.
Cream Mixtures	2	..	......
Dairy Queen	2	..	......
Dates	1	..	......
Diabetic Food	2	..	......
Disinfectants	3	..	......
Drinks and Cordials—Non-alcoholic	233	2	Contained quinine.
		2	Contained saccharin.
		5	Deficient in fruit juice.
Fairy Floss	7	..	......
Figs	1	..	......
Fish, Cooked	2	..	......
Fish, Fresh	3	..	......
Fish, Smoked	2	..	......
Fish, Tinned	7	..	......
Flour, S.R.,	1	..	......
Foreign Matter	5	..	......
Fry and Bacon	1	..	......
Oil of Garlic	1	..	......
Glutamal	2	..	......
Honey	7	..	......
Ice Blocks	14	..	......
Ice Cream	16	..	......
Ice Cream Mixture	3	..	......
Jams	2	..	......
Jelly Crystals	1	..	......
Malt Extract	1	..	......
Margarine	1	..	......
Milk, Condensed, Dried	5	..	......
Milo	1	..	......
Molasses	2	..	......
Meat, Fresh (Pure Food)	658	61	Sulphur dioxide found.
Meat, Fresh (Municipal)	29	4	Sulphur dioxide found.
Meat, Minced (Pure Food)	2,808	292	Sulphur dioxide found.
Meat, Minced (Municipal)	350	22	Sulphur dioxide found.
Meat, Sausages (Pure Food)	3,327	55	Contained excess fat.
		190	Contained excess sulphur dioxide.
Meat, Sausages (Municipal)	458	11	Contained excess fat.
		17	Contained excess sulphur dioxide.
Meat, Tripe (Pure Food)	185	12	Excess alkalinity.
		11	Sulphur dioxide found.
Meat, Tripe (Municipal)	35	..	......
Meat, Cooked, Smoked	1	..	......
Meat, Tinned	6	..	......
Meat Smallgoods	353	3	Unpermitted colour.
		84	Excess fat.
		4	Sulphur dioxide found.
Oil, Edible	2	..	......
Oil of Lemon	42	..	......
Olive Oil	20	3	Found to contain ground nut oil.
Oranges, Fresh	1	..	......
Pastry	3	1	Found to contain paraffin.
Peaches, Tinned	1	..	......
Peanut Oil	2	1	Found to contain cottonseed oil.
Pears, Tinned	1	..	......
Peas	1	..	......
Pola Cream	1	..	......
Potato	1	..	......
Prunes	1	..	......
Sultanas	1	..	......
Rice	2	..	......
Snow Dream	2	..	......
Soups	1	..	......
Straws (Drinking)	2	..	......

PARTICULARS OF SAMPLES EXAMINED IN CONNECTION WITH THE PURE FOOD ACT—*continued*

Nature of Sample	No. Examined	No. Adulterated	Particulars of Adulteration
Sugar	1	..	....
Sugarine	1	..	....
Spirits	210	55	Added water.
		1	Added other brands.
		15	Not brand stated.
Tea	5	..	....
Tomato Sauce, Juice, etc.	16	..	....
Toothbrushes	1	..	....
Vinegar	17	..	....
Waffles	1	..	....
Wine	13	2	Added Water.
DRUGS			
Souls Acne Solution	1	..	....
Amioca Starch	1	..	....
Ammonium Acetate	2	..	....
Aspaxadrene	1	..	....
Aspirin	1	..	....
Bidomal Tablets	1	..	....
Benzyl Benzoate	1	..	....
Bleaches	7	..	....
Calcium Fluor	1	..	....
Calcium Phosphate	1	..	....
Dexebrom	1	..	....
Dexedrine Tablets	6	..	....
Dolamin	1	..	....
Ephedrine Hydrochloride	1	..	....
Fishaphos Tablets	1	..	....
Oil of Saven	1	..	....
PAF	1	..	....
Paraffin, Liquid	2	..	....
Phenobarbitone	2	..	....
Preludin	1	..	....
Quinine Bisulphate Tablets	1	..	....
Ritalin	1	..	....
Salicylamide	1	..	....
Sandoptal Tablets	1	..	....
Sodium Pentobarbital	1	..	....
Solution 41 Innoxa	1	..	....
Sulphadiazine	1	..	....
Sulphanilamide	1	..	....
Valamin	3	..	....
Valuren	1	..	....
Veganin Tablets	1	..	....
Vitamin A Tablets	1	..	....
Vitamin B Tablets	3	..	....
Vitamin C Tablets	2	..	....
Pinke Zinke	1	..	....

TABLE II—CRIMINAL INVESTIGATION

Nature of Exhibits	No. of Exhibits	Nature of Charges
Tools	20	Break, enter and steal.
Blood	46	Driving under the influence of alcohol.
Urine	16	Suspected poisoning, driving under the influence of alcohol.
Tablets, capsules	12	Attempted murder, breach of Police Act, suspected poisoning, driving under the influence of a drug.
Paint Flakes	68	Stealing, rape, break, enter and steal, accidental death, theft, false pretences, fail to stop after accident, manslaughter.
Hair	7	Suspected poisoning.
Clothing	6	Attempted rape. manslaughter.
Miscellaneous	159	Illegal use of instrument, arson, poisoning animals false pretences, suspected poisoning, rape, attempted murder, accidental death, break, enter and steal, selling liquor without licence, malicious injury, assault, illegal distilling, assuming designation of doctor.

Table III—Coronial Investigations

Result of examination	No. of Cases
Negative for poison	88
Carbon dioxide	2
Arsenic	17
Amphetamine	1
Aluminium and silica	1
Barbiturates	69
Other Ureides	18
Chlorpromazine	1
Chloral Hydrate	2
Dinitro-o-cresol	1
Ethinamate	2
Glass fragments	1
Glutethimide	3
Lead	1
Nicotine	1
Phenols	4
Phenolphthalein and barbituric acid	3
Parathion	10
Potassium Bromide	1
Quinine and strychnine	2
Salicylic acid (traces only)	3
Strychnine	9
Thallium	3

PURE FOOD ACT, 1908, AS AMENDED—REPORT OF THE CHIEF INSPECTOR ON THE GENERAL ADMINISTRATION OF THE PURE FOOD ACT, 1908, AS AMENDED FOR THE YEAR ENDING 31st DECEMBER, 1959

Staff

Chief Inspector: W. J. Madgwick; Deputy Chief Inspector; Senior Inspector (Newcastle); 13 Inspectors; 1 Clerk; 1 Attendant.

I submit herewith particulars of the work performed by the Staff of the Pure Food Branch for the year ending 31st December, 1959.

The work includes the supervision of the sale of food and drugs, the premises in which they are prepared, stored and sold and the equipment, appliances and vehicles, and the carrying out of the incidental duties necessary to secure the wholesomeness, cleanliness and freedom from contamination of food and drugs and compliance with the legal provisions set out in the Pure Food Act, 1908, as amended and Regulations thereunder.

Milk

Samples taken by Officers of the Branch totalled 4,174, of which 181 failed to comply with the standard. Twenty-six (26) warnings were issued and 155 prosecutions were undertaken. Fines and costs imposed by the Court amounted to £1,151 5s. 0d.

Food and Drugs

Of 9,244 samples of various foods and drugs, other than milk, 777 were found on analysis to be below the standards prescribed. 76 warnings were issued and 701 traders were prosecuted for fines and costs totalling £5,679 16s. 0d.

Seizure and Destruction of Deteriorated Foods and Drugs

During the year over 105 tons and 24,000 assorted packages of foods and drugs were placed under seizure and subsequently destroyed as being unfit for food. In addition, regular inspection of birds sold at the City Poultry Markets resulted in the destruction of 6,447 head of poultry, these being considered emaciated, diseased and unfit for human consumption.

Premises Inspected

Of 10,352 premises inspected, 724 notices were served on traders to effect structural repairs or to remedy other defects in regard to their premises, this applied particularly in regard to glass washing facilities in hotels and other eating places. Forty-one (41) traders were prosecuted for failing to keep premises clean and in this connection fines and costs of Court amounted to £802. Three (3) traders were also proceeded against under the Local Government Act, Ordinance 39, for unclean premises and where fined a total of £46.

Breaches

Many breaches against the various regulations were also reported and the number of prosecutions amounted to 235, with penalties against the offenders totalling £2,017 8s. 0d.

Complaints

Complaints made by members of the public concerning unhygienic food handling practices received priority and 1,136 such complaints were investigated, whilst all of these complaints cannot be substantiated on investigation, many prosecutions did result from the prompt attention that was given to these matters and the public relations with this Department is greatly improved by this co-operation.

Legal Proceedings

The total number of prosecutions successfully instituted by Departmental Officers was 1,135 and the amount of fines and costs imposed was £9,696 9s. 0d.

Public Relations

I am still appearing once a week on 2GB's radio session, " I'm on your side " and during the year I addressed the undermentioned organisations:—

Padstow Rotary Club.
Hurstville Rotary Club.
Sans Souci Lions Club.
Sydney Soroptomists Club.
Sydney Junior Chamber of Commerce.
Manufacturing Confectioners Confederation of N.S.W.
Newcastle Group of Health Inspectors Association of N.S.W.
Australian Society of Dairy Technologists.
Country Soft Drink Association of N.S.W.
South Sydney Rotary Club.
Sydney Country Women's Association.
Concord Municipal Council's Official Health Exhibition opening.
Bowral Apex Club.

Conclusion

The overall amount of work performed compares favourably with that in previous years, there being one Inspector less than the Branch's established strength. I record my appreciation of the efforts made by the Staff and their continued loyalty to the Department.

TABLE I—SUMMARY OF WORK PERFORMED BY PURE FOOD OFFICERS FOR THE YEAR ENDING 31ST DECEMBER, 1959

Milk	Samples Taken by		Total
	Departmental Officers	City, Municipal and Shire Council Inspectors	
Number of Samples from all Parts of the State	4,174	945	5,119
Number below Standard	181	65	246
Number of Warnings	26	19	45
Number of Prosecutions	155	46	201
Amount of Fines and Costs	£1,151 5s. 0d.	£302 5s. 0d.	£1,453 10s. 0d.

Food and Drugs, Other than Milk

Number of Samples from all Parts of the State	9,244
Number below Standard	777
Number of Warnings	76
Number of Prosecutions	701
Amount of Fines and Costs	£5,679 16s. 0d.

Food and Drugs unfit for Consumption, Seized and Destroyed

The seizure and destructions comprised over 105 tons of food and drugs, 6,447 head of poultry, 24,831 cans and bottles, 66 bags and 30 gallons of food, and 259,200 tablets.

Number of Prosecutions	......
Amount of Fines and Costs	......

Inspection of Premises Used for the Preparation, Sale and Storage of Food

Number of inspections in all Parts of the State	10,352
Number of Notices Issued	724
Number of Prosecutions	41
Amount of Fines and Costs	£802 0s. 0d.

Particulars of General Breaches of Pure Food Act and Regulations

Number of Prosecutions	235
Amount of Fines and Costs	£2,017 8s. 0d.

Action Taken under Other Acts—Local Government Act

Number of Prosecutions	3
Amount of Fines and Costs	£46 0s. 0d.

Table II—Summary of Legal Proceedings, 1959

Offence under Pure Food Act, 1908, as Amended	No. of Prosecutions	Amount of Fines and Costs
		£ s. d.
Adulterated Milk	155	1,151 5 0
Adulterated Foods and Drugs	701	5,679 16 0
Unclean Premises	41	802 0 0
General Breaches	235	2,017 8 0
Local Government Act	3	46 0 0
Grand Totals	1,135	9,696 9 0

Table III — Summary of Work carried out by Pure Food Officers under the Pure Food Act, 1908, as amemded

From the Date of its Operation (October, 1909, to 31st December, 1959)

	No. of Premises Inspected	Total No. of Samples Taken	Total Below Standard	Prosecutions	Amount of Fines and Costs
					£ s. d.
Premises Inspected	461,658	....	....	3,113	21,041 2 0
Breaches of Act and Regulations	....	....	....	4,767	22,015 7 6
Milk Samples	....	388,077	13,050	8,492	43,814 3 0
Foods and Drugs Samples	....	237,118	19,722	14,256	65,698 12 10
Food and Drug Seizures	....	....	....	435	2,044 11 0
Totals	461,658	625,195	32,772	31,063	154,613 16 4

Food and Drug Samples

Particulars of Samples of Food and Drugs taken for Analysis by Departmental Officers during the Year ending 31st December, 1959

Samples	No. of Samples	No. of Warnings	No. of Prosecutions	Amount of Fines and Costs
				£ s. d.
Ales and Beer	57	..	..	......
Bread	121	11	2	12 0 0
Butter	8	..	..	......
Cereals	3	..	1	11 0 0
Cheese	4	..	..	......
Coffee and Chicory	5	..	..	......
Condiments	13	..	..	....
Confectionery and Chocolate	14	..	3	33 0 0
Cordials, S. and T. Drinks	235	2	5	40 0 0
Cream and Cream Mixture	133	..	4	31 0 0
Drugs and Disinfectants	63	1	2	16 4 0
Essences	1	..	..	....
Fats and Oil	25	..	4	45 13 0
Fish	10	..	1	6 0 0
Flour	6	..	..	....
Fruit, Fresh and Preserved	13	..	4	34 0 0
General	61	..	1	11 0 0
Honey	6	..	..	....
Ice-Cream and Flavoured Ices	38	..	1	5 0 0
Margarine	11	..	..	....
Meat (Fresh, Canned, &c.)	8,090	61	608	4,786 19 0
Microbiological Examination	143	..	..	....
Milk and Flavoured Milk	4,174	26	155	1,151 5 0
Pastry	9	..	..	....
Spirits	156	1	63	630 0 0
Sugar	1	..	..	....
Tea	2	..	..	....
Vegetables and Fruit Pulp	3	..	..	....
Wine	13	..	2	18 0 0
Totals	13,418	102	856	6,831 1 0

Particulars of Inspections by Pure Food Branch Officers during 1959

District	No. of Inspections	No. of Notices	No. of Prosecutions	Amount of Fines and Costs
				£ s. d.
Abercrombie	5	1	..	....
Albury	86	4	1	6 0 0
Armidale	23	..	..	....
Ashfield	167	9	..	....
Ashford	10	..	..	....
Auburn	44	8	..	....
Bankstown	153	7	3	39 0 0
Bathurst	137	3	..	....
Baulkham Hills	16	..	..	....
Bega	13	2	1	11 0 0
Blacktown	107	7	..	....
Blaxland	20	1	..	....
Blue Mountains	176	4	..	....
Boree	19	..	..	....
Botany	57	..	1	16 0 0
Bowral	54	5	..	....
Burwood	115	7	..	....
Byron	31	1	2	32 0 0
Camden	57	6	..	....
Campbelltown	86	15	1	41 0 0
Canobolas	18	1	..	....
Canterbury	150	10	..	....
Cessnock	25	18	1	21 0 0
Coffs Harbour	34	..	1	31 0 0
Concord	12	1	...	....
Cooma	66	6	2	14 0 0
Cootamundra	49	2	..	....
Corowa	20	3	..	....
Cowra	25	4	..	....
Culcairn	9	1	1	6 0 0
Drummoyne	107	..	..	....
Dubbo	40	4	..	....
Eurobodalla	18	1	..	....
Fairfield	46	..	..	....
Finley	30	..	..	....
Forbes	2	1	..	....
Glen Innes	22	..	..	....
Gosford	59	3	..	....
Goulburn	19	..	..	....
Grafton	27	..	..	....
Grenfell	7	2	..	....
Hastings	26	1	..	....
Holbrook	9	..	..	....
Holroyd	45	2	..	....
Hornsby	231	10	..	....
Hume	1	1	..	....
Hunter's Hill	19	..	..	....
Hurstville	111	3	..	....
Junee	26	1	..	....
Kempsey	8	8	..	....
Kiama	2	2	..	....
Ku-ring-gai	196	5	..	....
Kyogle	25	..	..	....
Lake Macquarie	134	17	..	....
Lane Cove	99	3	..	....
Leeton	38	..	..	....
Leichhardt	162	16	..	....
Lismore	19	..	..	....
Lithgow	69	4	..	....
Liverpool	103	4	..	....
Lyndhurst	13	..	..	....
Maclean	20	..	1	31 0 0
Maitland	152	5	1	16 0 0
Manly	212	1	1	21 0 0
Marrickville	311	13	1	11 0 0
Mittagong	35	5	..	....
Moree	34	..	..	....
Mosman	212	3	..	....
Mullumbimby	2	..	..	....
Muswellbrook	13	..	..	....
Nambucca	2	1	..	....
Narrabri	17	..	1	20 0 0
Narromine	22	..	..	....
Nattai	17	..	..	....
Newcastle	544	75	..	....
North Sydney	424	9	..	....
Oberon	17	2	..	....
Orange	149	3	..	....
Parkes	35	1	...	....
Parramatta	287	16	..	....
Penrith	79	5	..	....
Port Stephens	38	11	..	....
Queanbeyan	66	2	..	....
Randwick	275	13	3	113 0 0

Particulars of Inspections by Pure Food Branch Officers during 1959—*continued*

District	No. of Inspections	No. of Notices	No. of Prosecutions	Amount of Fines and Costs		
				£	s.	d.
Richmond	12	..	..	....		
Rockdale	102	9	2	42	0	0
Ryde	446	13	..	....		
Shellharbour	1	..	..	....		
Shoalhaven	89	8	..	....		
Singleton	16	12	..	....		
Strathfield	64	11	..	....		
Stroud	8	..	..	....		
Sutherland	134	9	1	11	0	0
Sydney	1,254	181	3	133	0	0
Tamworth	19	..	..	....		
Taree	5	..	1	15	0	0
Temora	49	..	..	....		
Tumut	43	..	..	....		
Tweed	14	..	1	5	0	0
Wade	23	..	1	6	0	0
Wagga Wagga	5	3	1	11	0	0
Walgett	4	..	2	20	0	0
Warringah	457	11	1	21	0	0
Waugoola	1	..	1	11	0	0
Waverley	191	15	1	21	0	0
Wellington	40	1	..	....		
Werris Creek	16	..	..	....		
Willoughby	270	11	..	....		
Windsor	59	6	..	....		
Wingecarribee	58	7	1	16	0	0
Wollondilly	81	11	1	16	0	0
Wollongong	250	24	2	45	0	0
Woolgoolga	36	13	..	....		
Woollahra	120	..	..	....		
Wyong	12	..	..	....		
Yarrowlumla	13	..	..	....		
Totals	10,352	724	41	802	0	0

Seizures

Particulars of Food and Drugs Seized as unfit for Human Consumption and Destroyed during the Year ending 31st December, 1959

Goods	Tons	Cwts.	Qrs.	Lb.	Bottles, etc.
Cereals	16	17	3	14	61 bags.
Cheese	..	13	..	..	
Confectionery	2	3	1	16	
Drugs	..	3	..	15	259,200 tablets. 123 bottles. 30 gallons. 336 cans.
Fish	4	3	..	5	
Flour	..	2	..	26	
Fruit, Dried	5	9	..	5	
Fruit, Preserved	5	4	2	2	
General, Groceries	9	6	1	3	
Meat	5	18	..	14	
Milk Products	42	3	2	15	5 bags. 60 bottles. 121 packets. 312 cans.
Nuts	11	16	2	2	
Olives	..	..	3	6	
Pickles	..	5	3	26	
Poultry	..	..	..	..	6,447 head.
Salt	..	14	..	26	
Soup	..	..	..	..	24,000 cans.
Vegetables	..	8	2	10	
Totals	105	10	1	17	183 bottles. 66 bags. 6447 head. 30 gallons. 24,648 cans. 259,200 tablets.

Particulars of General Breaches of the Act and Regulations undertaken by Departmental Officers during the Period 1st January to 31st December, 1959

	No. of Prosecutions	Amount of Fines and Costs £ s. d.
No methyl violet in waste beer	3	17 0 0
Jug in drip tray	1	1 0 0
Bags on dough	4	24 0 0
Smoking in food premises	57	335 0 0
Unlabelled oysters	11	82 0 0
Bread in contact with newspaper	9	53 0 0
Food, including bread, exposed to dust, etc.	48	317 0 0
Bread returned to delivery vehicle	2	19 0 0
Food exposed on counter	18	106 0 0
Unnecessary food handling	6	69 0 0
Meat improperly wrapped and in contact with newspaper	5	30 0 0
Meat carried in boot of car	1	16 0 0
Sale of meat from other than butchers shop	2	17 0 0
Cockroach and fly infested premises	30	407 0 0
Unclean utensils, appliances, etc.	18	208 0 0
Unclean vehicle	2	27 0 0
Permit dog on food vehicle	1	21 0 0
Permit animals in food premises	4	67 0 0
Milk in cans exposed to sun	1	5 0 0
Sell unlabelled food	3	14 0 0
Urinating in meat market	1	19 8 0
Store food in sleeping apartment	2	46 0 0
Mice and insect infected premises	5	76 0 0
Fail to keep premises free from foul odours	1	41 0 0
Totals	235	2,017 8 0

Particulars of General Breaches of the Act and Regulations reported following Board's Approval to prosecute by City, Municipal and Shire Councils Authorised Officers for the Year ending 31st December, 1959

Council	Particulars of Offence	No. of Prosecutions	Fines and Costs £ s. d.
Auburn	Unclean premises	1	13 7 0
Cooma	Smoking in food premises	2	15 7 0
Corowa	Unclean appliances	2	15 0 0
Guyra	Unclean premises	1	11 0 0
Holroyd	Unclean premises	1	14 5 0
	Fly infested premises	1	14 5 0
Leeton	Unclean premises	2	18 8 0
	No methyl violet in waste beer	1	6 4 0
Leichhardt	Bread exposed to dust, &c.	6	55 3 0
	Melon exposed to dust, &c.	1	10 4 0
	Smoking in food premises	1	8 4 0
	Unclean premises	1	16 5 0
	Unclean utensils	1	15 4 0
	Cockroach infested premises	1	25 4 0
Mitchell	Fly infested premises	4	24 9 0
	Unclean untensils	3	15 6 0
	Unclean premises	2	14 5 0
Tenterfield	No methyl violet in waste beer	1	10 0 0
Wagga Wagga	Smoking in food premises	5	20 3 0
	Unclean premises	3	27 0 0
	Meat wrapped in newspaper	2	8 0 0
Wollongong	Unclean premises	1	39 3 0
	Fly infested premises	1	8 2 0
	Unnecessary food handling	1	8 2 0
	Food in direct communication with W.C.	1	8 2 0
	Unclean appliance	1	8 2 0
	Totals	47	428 14 0

Particulars of Samples of Milk taken by Authorised Officers of City, Municipal and Shire Councils during the Year ending 31st December, 1959

Council	No. of Samples	No. below Standard	No. of Warnings	No. of Prosecutions	Amount of Fines and Costs		
					£	s.	d.
Albury	25	4	3	1	5	0	0
Bathurst	23	2	..	2	10	0	0
Bland	2	..	..	..			
Broken Hill	25	..	..	..			
Carrathool	9	2	..	2	10	0	0
Casino	22	..	..	..			
Coff's Harbour	30	2	..	2	24	12	0
Coolamon	6	..	..	..			
Coonabarabran	16	4	1	3	15	0	0
Cootamundra	37	2	1	1	3	0	0
Crookwell	12	4	..	4	38	0	0
Culcairn	6	..	..	..			
Dubbo	22	..	..	..			
Forbes	6	..	..	..			
Glen Innes	11	1	..	1	6	0	0
Grenfell	17	1	..	1	1	0	0
Gunnedah	15	..	..	..			
Hay	19	8	2	6	56	5	0
Kempsey	66	3	2	1	10	0	0
Kyogle	10	..	..	..			
Leeton	48	9	3	6	40	8	0
Maitland	15	1	..	1	5	0	0
Merriwa	4	..	..	..			
Murrumburrah	10	2	1	1	3	0	0
Newcastle	19	..	..	..			
Orange	25	..	..	..			
Parkes	26	3	1	2	11	0	0
Peak Hill	7	..	..	..			
Quirindi	8	3	..	3	24	15	0
Sydney	318	..	..	..			
Tallaganda	9	1	1	..			
Wade	10	5	1	4	16	0	0
Wagga Wagga	32	1	1	..			
Warren	12	5	..	5	23	5	0
Woodburn	6	..	..	..			
Yarrowlumla	7	1	1	..			
Young	10	1	1	..			
Totals	945	65	19	46	302	5	0

HEALTH INSPECTION BRANCH—ANNUAL REPORT, 1959

As at 31st December, 1959, the staff consisted of a Chief Health Inspector, Mr. K. R. Horne, F.I.H.S., one Deputy Chief Health Inspector, eight Certificated Health Inspectors, two Licensed Surveyors, one Senior Female Tracer, two Junior Clerks and one Records Attendant. Four positions for Health Inspectors were vacant. In addition, four Senior Inspectors are attached to the offices of the Medical Officer of Health, Hunter River Health District, South Coast Health District, Mitchell Health District, and Richmond-Tweed Health District, and one Inspector to the Medical Officer of Health, Metropolitan Health District.

The field work of the Branch has been considerably reduced throughout the year, due to shortage of staff and inability to recruit suitable staff. During the year five new appointees commenced duty with the Branch while three inspectors resigned.

Briefly the Officers of the Branch are authorised to carry out the duties, and to make inspections and reports on matters arising out of the administration of following Acts: The Public Health Act, 1902 (as amended), and Regulations, The Noxious Trades Act, 1902 (as amended), and Regulations, The Local Government Act, 1919 (as amended), and Ordinances, and The Pure Food Act, 1908 (as amended), and Regulations (when incidental to other work).

Work carried out by the Branch in 1959 comprised the inspection and re-inspection of Local Government Areas to ascertain whether Councils, under Acts relating to Public Health, were administering these Acts efficiently. The inspection and the investigation of Councils records, Sanitary Depots, Nightsoil and Garbage Removal Services, Sewerage Works, business and private premises, public hospitals, public buildings, schools, hotels, swimming pools, cemeteries, crematoria, and recreation grounds also formed a large part of the activities of the Branch.

Investigation was made of applications for approval of Scavenging Districts, Sanitary Depots, Septic Tanks and Closets, Noxious Trades, Crematoria, Theatres and Public Halls.

Other activities included the preparation of draft legislation and amendments, the examining and reporting on Town Planning proposals, and the administration of all matters arising out of Sections 54 and 55 of the Public Health Act, 1902 (as amended), regarding the notification of land unfit for building purposes.

Applications in connection with searches for unhealthy building land received from Solicitors for the year amounted to 61,930, an increase of 11,695 over the previous year.

A total of 273 inspections of land were made. Eight new areas of land were recommended to be notified as unhealthy building land under the provisions of Sections 54 and 55, Public Health Act, 1902 (as amended). These are areas situated at Hurstville, Werrington, Port Macquarie, Wyong, Ballina, Fairfield, and two at Gosford.

Five previously notified areas of land situated at Kogarah (2), Wollongong (2), and Ryde, were revoked.

Routine work consisted of: 3 Sanitary Surveys of Towns; 34 Sanitary Depot sites were inspected and recommended for approval; 17 Hotels were inspected.

Following reports from the Branch, the Board of Health approved the following: 751 Noxious Trades applications; 9,211 Septic Tank applications; 3,421 Septic Closet applications.

The numbers not recommended were: 5 Noxious Trades applications; 857 Septic Tank applications; 56 Septic Closet applications.

During February the Department's brochure " Domestic Septic Tanks " was printed and issued, Councils were circularised regarding same, together with conditions under which all types of septic tanks would be approved.

PRIVATE HOSPITALS (AMENDMENT) ACT—REPORT ON THE OPERATION OF THE ACT FOR THE YEAR ENDING 31st DECEMBER, 1959

By A. J. Hope, M.B., Ch.M.

Another year of progress has passed—increase in numbers of units is almost wholly confined to Private Hospitals, but there has been considerable increase also in the number of beds in both Private Hospitals and Rest Homes during the year.

Enquiries from prospective licensees for information and inspection of likely premises kept at a high level, as did requests by existing licensees for approval of plans of expansion to existing establishments.

Overcrowding remains a prevalently undesirable feature which seems impossible of full control; the claim is invariably made that the admissions causing it are of urgent nature which, on enquiry, generally cannot be easily refuted.

Complaints received are varied, and our experience indicates that too often they refer to places conducted by a group of persons usually untrained who are temperamentally unsuited to their work. Infractions by them are common, e.g., such as lack of sympathy, casualness and sharp address. Unreasonably high fees is another prime cause for complaint but this cannot be adequately dealt with. However, the abovementioned conditions constitute a minority. The great bulk of institutions are deserving and fulfil a vital requirement in the health sphere of the community.

TABLE I — SHOWS THE NUMBER OF PRIVATE HOSPITALS IN CATEGORIES, 1959

	M.S.L.	M.S.	L.	M.PO.	M.	Psy.	M.L.	M.PO.L.	M.S.PO.	Total
Metropolitan ..	20	35	4	71	2	2	1	1	..	136
Country	19	11	9	10	2	..	2	8	1	62
Total ..	39	46	13	81	4	2	3	9	1	198
Loss or Gain ..	—2	+1	—5	+24	-1	-1	No Change	-2	No Change	+14 7.6%

As customary, the major increase is in the M.PO. Category.

TABLE II — SHOWS BED CAPACITY OF DIFFERENT CATEGORIES OF HOSPITALS, 1959

	M.S.L.	M.S.	L.	M.PO.	M.	Psy.	M.L.	M.PO.L.	Total
Metropolitan	736	1,002	14	1,344	38	45	8	5	3,192
Country	151	150	53	97	34	..	9	63	557
Total	887	1,152	67	1,441	72	45	17	68	3,749
Loss or Gain	+11	+5	—37	+352	—21	—12	No Change	-14	+284 8·1%

TABLE III — SHOWS CLASSIFICATION OF PRIVATE HOSPITALS WITH RESPECT TO SIZE AS SIGNIFIED BY NUMBER OF BEDS

	1 Bed	2 Beds	3 Beds	4–5 Beds	6–10 Beds	11–20 Beds	Over 20 Beds	Total
Metropolitan	2	1	1	6	30	49	47	136
Country	7	1	2	10	20	16	6	62
Total	9	2	3	16	50	65	53	198
	+2	-2	-2	+1	+7	+3	+5	+14

It has always been that those hospitals accommodating ten or more people mainly show the increase.

TABLE IV — SHOWS TREND DURING FIVE YEAR PERIOD—31ST DECEMBER, 1954, TO 31ST DECEMBER, 1959

	Total Hospitals	Total Beds	1 Bed	2 Beds	3 Beds	4–5 Beds	6–10 Beds	11–20 Beds	Over 20 Beds
1954	171	2,634	10	10	7	19	48	46	31
1959	198	3,749	9	2	3	16	50	65	53
Variation	+27	+1,115	-1	-8	-4	-3	+2	+19	+22
Percentage	15·2%	42·3%	..	..	..	..	..	..	..

This table confirms the long established trend—hospitals providing for ten or more beds show the increase.

Rest Homes

TABLE I — SHOWS NUMBER OF HOMES AND NUMBER OF BEDS IN EACH TYPE

	Number of Homes				Number of Beds			
	General	After-care	Psychiatric	Total	General	After-care	Psychiatric	Total
Metropolitan ..	211	1	2	214	4,324	26	27	4,377
Country	19	..	..	19	260	..	..	260
Total ..	230	1	2	233	4,584	26	27	4,637
Variation	+2	No Change	-1	+1	+287	+2	-8	+361

Of these numbers, eight are interim licenses accounting for ninety-six of the beds.

TABLE II — REST HOMES IN ACCORDANCE WITH THE NUMBER OF BEDS

	1 Bed	2 Beds	3 Beds	4–5 Beds	6–10 Beds	11–20 Beds	Over 20 Beds	Total
Metropolitan ..	..	..	..	9	49	90	66	214
Country	..	..	..	..	6	12	1	19
Total ..	..	..	..	9	55	102	67	233
Variation ..	-1	No Change	No Change	-1	-8	+3	+8	+1

In accordance with past trends mainly those Homes catering for more than ten patients show increase.

MEDICO-LEGAL SECTION—GOVERNMENT MEDICAL OFFICER, SYDNEY, AND HOSPITAL ADMISSION DEPOT—ANNUAL REPORT, 1959

Staff

Medical Staff: The Government Medical Officer, Dr. C. E. Percy; The Deputy Government Medical Officer, Dr. J. Laing; One Assistant Government Medical Officer; Three Medical Officers.

Hospital Admission Depot: The Officer-in-Charge; The Assistant Officer; The Night Officer; The Relieving Night Officer; Escort Attendants (from Lidcombe State Hospital).

Functions

ADMISSIONS TO HOSPITALS AND HOMES

(i) A day and night service for the arranging of admissions to metropolitan hospitals.
(ii) The arranging of admissions to State Hospitals and Homes.
(iii) The arranging of admissions to Convalescent Homes.
(iv) The arranging of admissions of country patients to metropolitan and base hospitals.
(v) The arranging of ambulance transport.

MEDICAL EXAMINATIONS

Medical examinations for various Government Departments, including visits to various hospitals and the homes of persons too ill to attend for examination.

The medical examination of police recruits, including probationary constables, police cadets and women police, the periodical examination of police cadets and the examination of probationary constables for confirmation of appointment after twelve months' service.

The medical examination of members of the police force at the daily sick parade at Police Headquarters, including supervision of those on sick leave and the determination of fitness for promotion. Matters relating to the general health and fitness of the Police Force are also dealt with, and the treatment and the accounts for medical attention in connection with injuries sustained while on duty are supervised.

MEDICO-LEGAL WORK

The performance of autopsies for the City Coroner. When necessary, country centres are visited in connection with homicide matters.

The examination of victims of various types of criminal assaults, and of persons charged in connection with such matters.

The giving of evidence in various courts in connection with examinations made for the City Coroner, and the Police.

OTHER SERVICES

Vaccinations against Smallpox for members of the public and members of the Police Force, and the issue of International Certificates of Vaccination.

The taking of throat swabbings for children being admitted to various Homes.

Appendix I—Table Showing Activities for the Years 1957, 1958, 1959

	Year ending 31st December, 1957	Year ending 31st December, 1958	Year ending 31st December, 1959
Admissions to Hospitals and Homes			
Metropolitan Hospitals	1,914	2,326	1,822
State Hospitals and Homes, Chronic Hospitals ..	3,814	3,799	4,030
Convalescent Homes	827	795	784
Medical Examinations for various Government Departments	2,460	2,731	2,555
Medical Examinations for the Police Department—			
Police—Recruits—First Examinations	1,285	1,292	1,413
Police Recruits—Re-examinations	510	743	324
Probationary Constables—Confirmation of appointment	273	412	319
Periodic examination of cadets	207	242	249
Daily average of police on sick report..	113	101	122
Examinations for the City Coroner (including week-ends)	1,916	1,906	2.067
Examinations of Criminal Assault Cases	158	155	207
Vaccinations and International Certificates—			
Vaccinations (Smallpox)	4,325	4,435	4,565
International Certificates	5,148	5,607	5,497
Throat Swabbings	563	481	593

Appendix II—Comments

The activities for the year are set out in the accompanying table, together with comparative figures for the two preceding years.

There was a decrease in the number of admissions arranged by the Hospital Admission Depot to Metropolitan Hospitals. This indicates a lessened demand for beds for acute cases. In addition, accommodation was more easily found owing to the increasing numbers accepted by some of the outer suburban hospitals. On the other hand, the requests for admissions to the Lidcombe State Hospital, including the yard section, and to the various chronic hospitals showed an increase. There is still some difficulty in admitting patients with the more chronic type of illness without some waiting period, but more assistance is now available from Garrawarra, the Homes of Peace and the Lottie Stewart Hospital. The work of the Almoner is valuable in assessing the urgency of the requests for admission and in arranging accommodation in private hospitals when possible.

The total number of medical examinations for the year was less than that of last year, but there was an increase in the number of first examinations of applicants for admission to the Police Force, which is a reflection of the drive to obtain additional recruits to cover an increase in the authorised strength. There was an increase in the amount of sick leave taken by members of the Police Force. This is shown in the increase in the daily average on sick report.

The number of autopsies performed for the City Coroner showed an increase giving a peak figure for the work. Another feature of the medico-legal work was the marked increase in the number of criminal assault cases examined. Assistance was given during the year in homicide matters occurring in the country by examination of specimens and conferring with the medical practitioners performing the autopsies. Training in autopsy work was also given at the Sydney Morgue to medical practitioners from country centres.

During the year, members of the Police Force were given two of a series of three injections to immunise them against Tetanus, and the third of the series of three injections of Poliomyelitis vaccine.

The entire work of the Division is carried on under difficulties in regard to lack of space. This applies particularly to the waiting room, general office and medical examination rooms at 93 Macquarie Street. However, with some reorganisation of the various aspects of the work some adverse features in regard to overcrowding in the waiting room have been partly overcome.

Government Medical Officer, Newcastle—Annual Report, 1959

STAFF

Dr. P. A. Rundle—Government Medical Officer.

MEDICAL WORK

	Number of Examinations
(1) Examination of persons for appointment to and fitness to continue in the Public Service for State Government Departments and also for various Allied Bodies	215
(2) Examinations of returned soldier applicants for travelling concessions ..	118
(3) Attendance at Admission Centre, Newcastle, in connection with the examination and certification of insane patients	363
(4) The G.M.O. is a medical referee and member of the local Medical Board for the Worker's Compensation Commission	..

MEDICO-LEGAL WORK

(1) The performance of autopsies at the request of the District Coroner in cases of homicide, suicide and violent and uncertified deaths	326
(2) The examinations of persons at the request of the Police Department in cases of rape, assault, etc.	27
(3) Attendance at various courts and giving evidence in connection with any of the above cases	..

HEALTH EDUCATION AND PUBLIC RELATIONS—ANNUAL REPORT, 1959

Publicity Branch

The staff of the Publicity Branch consists of the Publicity Officer, Assistant Publicity Officer, a clerk, a typist, and a projectionist. The projectionist also handles the bulk despatch of publicity material.

The functions of the branch are to promote health aduction and public relations programmes by all available methods and by the use of as wide a range of media as can be encompassed.

Most of these programmes are presented by the indirect method, using the press, radio, television, films, posters, leaflets, booklets, exhibitions, etc. However, lectures are given to various organisations, and group discussions on various matters of health are arranged.

Much of the material produced by the Branch is used as teaching aids and guides in the schools, the teachers' training colleges, and the teaching hospitals, and in these areas also, films from the Branch's film library are used extensively.

In addition, the Local Authorities call upon the Branch heavily for supplies of a wide variety of written educational and display material.

In 1959 the following material was supplied by the Branch, mainly to the Local Authorities and Schools: Posters, 36,615; Pamphlets, 354,323; Books, 106,731.

In addition, a very large quantity of leaflets and booklets was supplied direct by the printers to Baby Health Centres, and the Councils. Included in this were some 100,000 copies of " Our Babies " and " Healthy Motherhood ".

One hundred and seventy-five (16 m.m.) film screenings to various social and voluntary organisations were presented by the Branch during the year. There were 1,678 loans of films during the same period.

More details of the routine work carried out during the year are:—

Press—Apart from the suburban press in connection with district T.B. surveys, very little use was made of paid press advertising during the year. However, all metropolitan, suburban, and country papers were supplied weekly with three press articles, and every opportunity was taken to provide the press with editorial material of a topical nature.

Radio—Little use is made of paid announcements on the Commercial radio stations. However, all stations are supplied with two articles each week for broadcasting, and as the opportunities present themselves, Departmental staff give broadcasts on a wide variety of health subjects.

Television—Departmental staff appear from time to time on television programmes, including a regular monthly session on Channel 2. Undoubtedly, many more facilities could be obtained, but because of shortage of qualified staff, and the unduly large amount of time involved in a television appearance, this aspect has not been pursued.

Health Week—The theme of the 1959 National Health Week was " Clean Hands for Good Health ". The Branch organises Health Week activities in this State, and made a special drive through the schools and local councils to emphasize the importance of the 1959 theme.

This was done by the preparation of a special supplement to the *Education Gazette*, the holding of an Essay competition, and the supply of health educational material and notes for radio talks and newspaper articles.

The main exhibition in connection with National Health Week was again at the Sydney Town Hall.

All the usual mass communication media are used in connection with Health Week.

Voluntary Organizations—The Branch works as closely as possible with the many voluntary organizations operating in the field of public health and endeavours to assist these groups by personal liaison, film screenings, supply of health education material and expert advice.

During the year the Branch co-operated with these groups on a wide variety of projects, including mental health, old peoples welfare, life-saving techniques, world health, and tuberculosis.

New Projects—Two new significant projects were initiated during the year. One was the decision to publish a quarterly journal on health matters, the other was the undertaking of an attitude survey into tuberculosis.

The new journal will contain articles on various aspects of public health administration in this State, and other subjects, and will be distributed to medical practitioners, schools, councils, and others working in the field of health. It is hoped by the journal, to provide a medium of health education and public relations that will keep the community informed on the health services that are available.

The attitude survey into tuberculosis will be undertaken in an attempt to discover why the attendances at district chest X-ray surveys have dropped by approximately one-quarter over the past few years. There are many conjectures as to the reasons—complacency, lack of interest, fear of radiation, poor publicity—but it is hoped that the attitude survey will reveal the true reasons clearly.

The survey is being undertaken by a Sydney firm, and the results will be available in 1960.

C. Nutrition

ANNUAL REPORT, 1959

Staff

2 Dietitians.
1 Secretary to State Nutrition Committee.

Functions and Responsibilities

The Nutrition Section is responsible to a Medical Officer for the interpretation of the findings of recent nutrition research to the lay public and for the dissemination of information on nutritional requirements in health and disease, food values and costs, cooking methods and the organisation of food services. Its officers also carry out the secretarial and executive work of the State Nutrition Committee and the New South Wales Institute of Dietitians.

Activities during the Year

Press Articles, Broadcasts, Television, etc.

Regular weekly articles and radio scripts (200-400 words) were prepared for metropolitan and country newspapers and radio stations. The number of regular press articles required was reduced in June from six per month to four. However, a new development has been the making of two tape recordings a month of nutrition interviews, or straight talks, for circulation through the nine Agricultural regions of the State. These tape recordings are used in the Agriculture Department's extension services radio programmes.

Broadcast scripts for a weekly bulletin on fruit and vegetable prices were prepared for a city broadcasting station in its Women's programme.

Special articles were written for the Sydney Morning Herald " Back to School " supplement, the handbook to the 35th State Congress of Agricultural Bureaux for the Parent and Citizen and the 1959 edition of " Family Health ".

One tape recording and two direct broadcasts were made on metropolitan radio stations to comment on matters of topical interest through the year.

Television appearances were made on A.T.N. and T.C.N. using actual foods to illustrate the themes, the " Five Food Groups " and the " Oslo School Lunch ".

Publications

Publications were revised when necessary for reprinting. These included " Diet Hints for Diabetics " and " Diet Hints for Peptic Ulcer Sufferers ", and the sections relating to diet in " Healthy Motherhood " and " Our Babies ".

The Low Cost Food Budget was revised with prices as at 1st May, 1959.

Lectures and Talks

A total of eighteen (18) lectures on normal nutrition and diet in disease were given to the Junior and Senior groups of Trainee Assistants-in-Nursing at Lidcombe State Hospital, and fourteen (14) cookery or special diet preparation classes were conducted.

Three series of five or six lectures on food and nutrition were given to groups of trainees at Karitane Mothercraft Home and Training Centre.

Two series of ten lectures each were given to students at the Training College of the Kindergarten Union and the Sydney Day Nursery Schools Association.

Enquiries

Numerous enquiries regarding normal nutrition, food values, costs and methods of cooking were dealt with by telephone, letter and personal interview.

Detailed individual therapeutic diets were supplied to those enquiries from whose physicians authority for the diet could be obtained.

Unfortunately, many requests for assistance with the planning of such diets have to be refused for want of this authority. Though few general practitioners seem aware of the existence of this service, there is a group of those who do know of it who constantly refer their pateients for dietary advice. It is considered that this is a service which, given some publicity in journals read by general practitioners could readily be expanded with benefit to the community.

INSTITUTIONS

A set of rotating menus suitable for use in private hospitals and rest homes for the elderly was prepared for distribution by the supervisory sisters where they consider the food service is unsatisfactory.

A dietitian visited Merton Rest Home, Woollahra, and gave the Matron some advice on menu planning.

A scale of food requirements for children of the various age groups was drawn up for the Child Welfare Department to assist with cost control in their institutions while ensuring nutritional adequacy.

At the request of the Child Welfare Department, the food service at the Church of England Boys Home in Wyatt Avenue, Burwood, was investigated. A report on the nutritional adequacy of the meals provided and recommendations for their improvement was made.

Assistance was given to the headmistress of the Sydney Church of England Grammar School for Girls at Moss Vale with the planning of Boarders' meals for greater variety and food value.

Broughton Hall Psychiatric Clinic was visited and a more varied three-weekly cycle menu was prepared which has since been implemented.

Newington State Hospital was visited to investigate and report on facilities for more varied patient and inmate menus and the need for revision of the ration scales.

Gladesville Mental Hospital was visited at the Manager's request for review of the menus prepared by the catering officer and for consideration of new ration scales and proposals for a special diet service.

Plans for a properly equipped cookery classroom to accommodate the trainee Assistants-in-Nursing at Lidcombe State Hospital were drawn up.

Consideration was given to the problems of staffing and equipping the diet kitchen in the newly opened main kitchen at Lidcombe State Hospital; to the best means of transport of diets to the various wards, and the need for adequate supervision of the service.

At the request of the Secretary of the Gunnedah District Hospital, a trip was made to the hospital to advise on its menu planning and food service.

PRENATAL CLINICS

Weekly attendances by a Dietitian were maintained at Parramatta and Hurstville prenatal clinics.

SURVEY INTO THE " EATING HABITS OF THE ELDERLY "

In connection with this survey proposed by the State Nutrition Committee, and together with the Department's social worker and Statistician, various welfare organisations for the elderly were visited and investigations made to discover whether an unbiased sample for the survey could be drawn from their records.

NEW SOUTH WALES STATE NUTRITION COMMITTEE

The executive and secretarial work of this body was carried out.

NEW SOUTH WALES INSTITUTE OF DIETITIANS

The executive and secretarial work of this Committee was done.

D. Division of Maternal and Baby Welfare

ANNUAL REPORT, 1959

The report is set out in three sections:—

Part I—Maternal Welfare.
Part II—Infant Welfare.
Part III—General.

The Head Office Staff is as follows:—

Director: Grace J, Browne, M.B.E., M.B., Ch.M., F.R.C.O.G.

Deputy Director: Eluned M. Puleston-Jones, M.R.C.S., L.R.C.P.

Medical Officers: (Five); Nurse Inspector, Deputy Nurse Inspector, Assistant Nurse Inspector, Clerical Staff, (Six).

Part I—Maternal Welfare

1. PRENATAL CLINICS

These Clinics are conducted in strategic positions in the Metropolitan Area. They give a service to mothers who live at a distance from the Hospital in which they are booked for confinement.

All patients come from Public Hospitals and are Public Patients.

In the ultimate the Hospital is responsible for the patients and the Medical Officers at the Pre-Natal Clinics only supervise the mothers during their pregnancy.

Should complications enter such as undue increase in weight or blood pressure or a similar variation from the normal then the patient is referred to the Hospital.

The important function of the Pre-Natal Clinics is to offer to mothers a more accessible and less expensive prenatal supervision and so prevent the failure to have adequate prenatal care which is an all too frequent occurrence.

With the rapid growth of this city and its surrounding districts, there is a lag in hospital facilities, particularly maternity units.

As soon as a hospital with adequate facilities is established then the prenatal clinic in that suburb is closed, e.g. Sutherland.

The largest of all prenatal clinics is, at present, conducted at Parramatta Baby Health Centre. Between seventy and eighty women attend weekly.

The vast majority of these mothers come from suburbs further west than Parramatta, e.g., Blacktown, Pendle Hill, Toongabbie, etc.

The maternity unit at Parramatta cannot cope with the number of births in the surrounding districts. Further, all women have the right of choice of hospital. The result of these two factors is that the greater proportion of mother attending Parramatta Prenatal Clinic are booked for confinement with the major teaching Hospital.

During 1959 serious consideration has been given to the establishment of a prenatal clinic at Blacktown. This would help the mothers in the area west of Blacktown and at the same time take the heavy overload off Parramatta.

A hospital is planned for Blacktown but it will be a long time before the maternity facilities would be adequate, particularly when the extraordinary growth in this area is considered.

Because of the lag in the establishment of Baby Health Centres in Blacktown Shire, it has not been possible to establish this prenatal clinic.

Blacktown Baby Health Centre works five days a week with two Sisters each day on Mothercraft alone.

Before a day or a half day can be taken for a prenatal clinic—relief in the form of a new Centre or Centres in Blacktown Municipality will be necessary.

Details in relation to this is discussed under Baby Health Centres.

During 1959 ten Prenatal Clinics were in operation and details in relation to attendances are supplied in Table II, below:—

TABLE II ATTENDANCES AT PRENATAL CLINICS—1959

Visits	Primiparae		Multiparae		Postnatal	Total Visits	No. of Sessions
	First	Sub-sequent	First	Sub-sequent			
Campsie	24	163	58	493	..	737	52
Dee Why	41	266	134	902	4	1,350	52
Granville	31	250	82	773	..	1,040	52
Hornsby	4	23	27	167	7	228	52
Hurstville	31	236	111	1,005	35	1,418	49
Liverpool	42	350	183	1,080	4	1,659	52
Manly	60	327	63	996	23	1,569	48
Mascot	9	61	45	289	19	430	47
Narrabeen	51	338	98	577	4	1,069	52
Parramatta	111	610	337	1,976	9	3,043	104
Total	404	2,624	1,138	8,258	105	12,543	560

2. SPECIAL MEDICAL COMMITTEE INVESTIGATING MATERNAL MORTALITY

During the year the Director-General, Dr. H. G. Wallace retired from the Department of Public Health and Dr. C. J. Cummins who was then appointed as Director-General took up the duties of the Chairmanship of the Committee.

The Members of the Committee were as follows:—

The Director-General of Public Health, Dr. H. G. Wallace, and his successor, Dr. C. J. Cummins;
Professor B. T. Mayes;
Emeritus Professor F. J. Browne;
Dr. J. H. Chesterman—representative of the Women's Hospital Crown Street;
Dr. K. J. Howell and later Dr. J. V. Mutton—representatives of the Royal Hospital for Women;
Dr. E. A. Tivey—representative of the New South Wales Branch of the British Medical Association.

The alternate Representatives were:—

Dr. R. B. C. Stevenson;
Dr. Ida B. Saunders and later Dr. K. S. Richardson, and Dr. Elliott-Smith respectively; and the Director of Maternal and Baby Welfare—Dr. Grace J. Browne as the Medical Secretary.

An extract from the Minutes of the last meeting attended by Dr. Wallace is of interest and reads as follows:—

> " The Chairman stated that, in his opinion, the Special Medical Committee Investigating Maternal Mortality was the most valuable of the Committees associated with the Department: the reason for this was in his opinion the eminence of the members of Committee, the high level of the discussions, the fairness of the appraisal of the material available and the frank maintenance of differences of opinion.
>
> The Chairman further stated that he found this the most interesting of all the Committees and considered its work to be of great value to the profession in this State, and that it had furthered the practice of improved standards of obstetric care of the mothers. The marked reduction in maternal mortality rates in New South Wales while not entirely due to this Committee had certainly been influenced by it ".

There have also been other changes in the personnel of the Committee during the year, Dr. Ida B. Saunders and Dr. K. J. Howell retired from the Royal Hospital for Women and the representation of the Hospital was taken over by Dr. J. V. Mutton and Dr. K. S. Richardson.

The Committee has been concerned about the cost to the mothers of receiving essential antenatal care as an in-patient and also as an out-patient or attending the consulting room of the medical practitioner. Investigations as to the cost of this care is proceeding.

THIRD REPORT

The Third Report of the findings of the Committee for the years 1950-1956 inclusive was sent to the Medical Journal of Australia for publication. Appreciation of the value of this report has been received from colleagues in Australia and overseas.

3. FREE CONSULTANT SERVICES

The Free Consultant Service for mothers in Sydney and fifty miles beyond was extended to the whole State from 1st Janurary 1959. This has proved a valuable asset to medical practitioners seeking consultation for difficult obstetric cases and has saved the lives of many mothers and babies.

Some of the areas where consultations have taken place are Bombala, Carcoar, Casino, Cessnock, Gloucester, Helensburgh, Kiama, Kurrajong, Larras Lee, Millthorpe, Molong, Newcastle, Orange, Parkes Wauchope, Windsor, and Wyong. In addition telephone consultations have proved invaluable and the cost of transport has been met when the medical practitioners concerned decided that the patient should be moved to a larger medical centre. This has been a life saving measure in a number of instances.

The Consultants participating indicate that in many instances where the life of the mother might have been saved without a consultation the baby would not have survived.

A further edition of the booklet entitled " Free Emergency Obstetric Services " was published during the year and distributed to all medical practitioners in New South Wales.

This booklet indicated the services available, the method of obtaining these services without delay and the procedure for payment of fees, recoupment for mileage and other relevant expenses. The services indicated are the free consultant services in the Metropolitan area of Sydney and all parts of the remainder of the State, mobile blood transfusion units, bacteriological services and publications.

In addition the legal measures for the control of puerperal infection are set out in detail.

4. MOBILE BLOOD TRANSFUSION SERVICE

This Mobile service is available day and night to mothers in the Metropolitan Area, and provides for the administration of a blood transfusion at the bedside of any obstetric patient wherever facilities for giving blood are not available, whether in a public or private hospital. During the year four transfusions were given.

Five Mobile Units operate from the following major Obstetric Hospitals and are in constant readiness to proceed immediately to the patient's bedside: the Women's Hospital Crown Street, Royal Prince Alfred Hospital, Royal North Shore Hospital, Royal Hospital for Women, and the St. George Hospital.

This service has been available since 1939, and is made possible by the co-operation of these Hospitals and the Red Cross Blood Transfusion Service.

The transfusion is given frec to the patient, if unable to pay the additional fee. Each Hospital provides the services of a Resident Medical Officer and Trained Nurse for each Unit. An honorarium is paid to each. Transport and equipment costs are also met by the Department.

Arrangements have been made with the twenty-one Hospitals throughout the suburbs for human albumin to be made available on request—this provides an additional safeguard as it enables immediate intravenous therapy to be given pending arrival of the Mobile Blood Transfusion Unit.

Study of the deaths of mothers in the country from haemorrhage by the Special Medical Committee Investigating Maternal Mortality revealed that on some occasions the administration of sufficient blood soon enough would have saved the life of the mother. It was also revealed that the facilities for obtaining blood were not as readily organised as in the Metropolitan area, although it is well known that stocks of blood are available at a number of hospitals.

An extension of the Mobile Blood Transfusion Service available twenty-four hours per day has been arranged with the Royal Newcastle Hospital.

A team with blood will go out from the Royal Newcastle Hospital to any obstetric patient within 100 miles of the Hospital under similar conditions to that in Sydney, i.e., the service is not available at the Hospital where the mother is being confined.

It is anticipated that similar services can be arranged from other hospitals where stocks of blood are available.

5. IMMUNE RUBELLA SERUM

The Red Cross Blood Transfusion Service has continued to make available supplies of immune rubella serum to medical practitioners for the protection of expectant mothers who have been exposed to rubella infection, and have not previously had this infection.

Shortage of supply has necessitated this serum being reserved for the use of those susceptible mothers, who, in the first sixteen weeks of their pregnancy have come into close contact with persons suffering from the disease.

6. " HEALTHY MOTHERHOOD " PUBLICATION

During 1959, a new edition of the Department booklet " Healthy Motherhood " was produced This booklet is available without charge to all Public Obstetric Hospitals, and to all Medical Practitioners in New South Wales for free distribution to expectant mothers.

Its chief aim is to raise the standard of antenatal care by encouraging the mother to co-operate with the doctor, hospital and clinic, to follow carefully the instructions given and to attend whenever required for medical supervision.

7. PHYSIOTHERAPY IN PREGNANCY AND THE PUERPERIUM

Physiotherapy is now part of the recognised educational programme for expectant mothers, and continues to play an important role in the well-being of the mothers during pregnancy, the confinement and the puerperium.

This aspect of preventative medicine and health education has been keenly supported by the Department since 1938, when the first teaching sound film on this subject was made. This was later replaced by a film in sound and colour. This is used for teaching students of medicine, physiotherapy and obstetric nursing.

Physiotherapy given under the supervision of qualified physiotherapists during pregnancy is a routine at the Royal Hospital for Women and the Royal North Shore Hospital. Physiotherapy during the puerperium is provided for mothers at most of the Metropolitan obstetric hospitals.

In " Healthy Motherhood " selected exercises are illustrated for the benefit of those mothers who cannot, on account of cost or distance, obtain the services of a trained physiotherapist.

8. CONTROL OF INFECTION

(*a*) Puerperal Infection

The incidence of puerperal infection has continued to decrease. A constant watch is kept by this Department to prevent the spread of puerperal sepsis, and so protect mothers from infection during or after confinement.

During 1959, forty-seven cases occurred of puerperal infection. Of these, forty-five were notified in cases where the patient survived, and of the two fatal cases, only one was notified by the medical practitioners concerned.

Under the Nurses' Registration Act, eighty nine cases of puerperal pyrexia were notified by midwifery nurses during 1959; of these seventy were found to be due to abnormal conditions, other than those associated with genital tract infection.

BIRTH STATISTICS

Live Births and Still Births—The number of live births in New South Wales during 1959, was 80,866, an increase of 821 compared with the previous year.

Still births numbered 1,241, showing an increase of 33 compared with the previous year.

The total number of births for the year was 82,107.

The live birth rate was 21·51 per 1,000 of the population which is ·16 lower than the rate for 1958, which was 21·67.

Details of births for the last three years are shown in Table III.

Table III — Live Births and Still Births — New South Wales—1957–1959

Year	Total Births (live and still combined)	Live Births		Still Births	
		Number	Rate per 1,000 of mean population	Number	Rate per 1,000 total births (live and still combined)
METROPOLIS					
1957	39,546	38,962	19·73	584	14·77
1958	40,062	39,540	19·59	522	13·03
1959	40,846	40,270	19·58	576	14·10
REMAINDER OF STATE					
1957	41,192	40,494	24·58	698	16·95
1958	41,191	40,505	24·19	686	16·65
1959	41,261	40,596	23·84	665	16·12
NEW SOUTH WALES					
1957	80,738	79,456	21·93	1,282	15·88
1958	81,253	80,045	21·67	1,208	14·87
1959	82,107	80,866	21·51	1,241	15.11

MATERNAL MORTALITY

Information relating to maternal mortality is shown in Tables IV—VI.

Table IV — Live Births and Maternal Mortality — New South Wales

Year	Live Births			Deaths from Puerperal Causes (Excluding Criminal Abortions)					
				Number			Rate per 1,000 Live Births		
	Metropolis	Remainder of State	N.S.W.	Metropolis	Remainder of State	N.S.W.	Metropolis	Remainder of State	N.S.W.
1957	38,962	40,494	79,456	20	36	56	0·52	0·89	0·71
1958	39,540	40,505	80,045	25	24	49	0·63	0·60	0·61
1959	40,270	40,596	80,866	20	26	46	0·50	0·64	0·56

During 1959 the number of deaths from puerperal causes (excluding criminal abortion) in New South Wales was 46, which represents a mortality rate of 0·57 women per 1,000 live births. The rate decreased by 0·05 compared with 1958.

Eight women died in New South Wales from criminal abortions in 1959 compared with three in 1958. Deaths from criminal abortion at ages 15 to 44 years were equal to 0·33 per cent of total deaths of females at these ages in 1958. The percentages increased to 0·81 in 1959. The proportion per cent. of all maternal deaths (including criminal abortion) fell from 5·71 in 1958 to 5·49 in 1959.

TABLE V — DEATHS FROM CRIMINAL ABORTION AND TOTAL PUERPERAL DEATHS — NEW SOUTH WALES

Year	Deaths from Criminal Abortion				Total Puerperal Deaths (Including Criminal Abortion)			
	All ages		Ages 15 to 44 years		All ages		Ages 15 to 44 years	
	No.	Proportion per cent. of female deaths at all ages	No.	Proportion per cent. of female deaths at ages 15 to 44 years	No.	Proportion per cent. of female deaths at all ages	No.	Proportion per cent. of female deaths at ages 15 to 44 years
METROPOLIS								
1957	6	·07	6	1·11	26	·29	26	4·82
1958	2	·02	2	·39	27	·31	27	5·30
1959	4	·05	4	·72	24	·25	24	4·3
REMAINDER OF STATE								
1957	2	·04	2	·47	38	·68	38	8·90
1958	1	·02	1	·25	25	·47	25	6·23
1959	4	·07	4	·94	30	·51	30	7.06
NEW SOUTH WALES								
1957	8	·05	8	·83	64	·44	64	6·63
1958	3	·02	3	·33	52	·37	52	5·71
1959	8	·06	9	·92	54	·35	54	5.49

TABLE VI—DEATHS DUE TO PUERPERAL CAUSES, NEW SOUTH WALES—NUMBER AND RATE, *1956 TO 1959

Cause of Death	Metropolis								Remainder of State								New South Wales							
	1956		1957		1958		1959		1956		1957		1958		1959		1956		1957		1958		1959	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Toxaemias of Pregnancy	2	·05	3	·08	4	·10	6	·16	7	·18	9	·22	5	·13	2	·05	9	·12	12	·16	9	·11	8	·10
Ectopic Pregnancy	2	·05	1	·03	1	·03	3	·08	2	·05	..	..	..	..	2	·05	4	·05	1	·01	1	·01	5	·06
Placenta Praevia and other Haem. of Pregnancy	..	..	..	..	..	..	..	..	1	·03	1	·02	..	..	..	..	1	·01	1	·01	..	..	..	..
Other Complications of Pregnancy	1	·03	3	·08	2	·05	1	·02	1	·02	2	·06	4	·10	2	·05	2	·03	5	·07	6	·08	3	·04
Abortion excluding Criminal	1	·03	4	·10	6	·15	2	·05	..	..	1	·02	1	·02	3	·07	1	·01	5	·06	7	·09	5	·06
Delivery complicated by Haemorrhage.. ..	2	·05	4	·10	4	·10	..	..	6	·15	8	·20	5	·13	2	·05	8	·11	12	·16	9	·11	2	·02
Delivery with other Specified Complications ..	2	·06	2	·05	6	·14	4	·10	7	·18	8	·20	3	·08	7	·17	9	·12	10	·12	9	·11	11	·14
Puerperal Urinary Infection without other Sepsis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	·01
Sepsis of Childbirth and the Puerperium ..	3	·08	..	..	..	..	1	·02	3	·08	..	..	1	·02	1	·03	6	·08	..	..	1	·01	2	·02
Puerperal Phlebitis and Thrombosis	..	..	..	..	..	..	..	..	..	..	1	·02	1	·02	..	..	..	..	1	·01	1	·01	..	..
Puerperal Pulmonary Embolism	1	·03	1	·03	1	·03	2	·05	1	·03	4	·10	2	·05	4	·10	2	·03	5	·06	3	·04	6	·08
Other and Unspecified complications of the Puerperium	3	·08	2	·05	1	·03	..	..	3	·08	2	·05	2	·05	3	·07	6	·08	4	·05	3	·04	3	·04
Total excluding Criminal Abortion ..	17	·46	19	·52	25	·63	20	·48	31	·80	36	·89	24	·60	26	·64	48	·64	56	·71	49	·61	45	·56
Criminal Abortion	6	·17	6	·15	2	·05	4	·10	4	·10	2	·05	1	·02	4	·10	10	·13	8	·10	3	·04	9	·11
Total	23	·63	26	·67	27	·68	24	·60	35	·90	38	·94	25	·62	30	·74	58	·77	64	·81	52	·65	54	·67

* The number of deaths per 1,000 live births.

Part II—Infant Welfare

BABY HEALTH CENTRES

Over many years two major problems have beset Baby Health Centres.

These are: (*a*) Finance; (*b*) Staff.

(*a*) Finance

In 1944 a financial policy was established whereby the establishment and conduct of Baby Health Centres would be a combined effort of Central Government and Local Government or Country Women's Association.

The Local Government Authority and Country Women's Association are the only two bodies the Department enters into financial arrangements with in relation to Baby Health Centres.

These bodies are responsible for supplying the site of land, 25 per cent. of the cost of building and equipment, and the maintenance of the established Centres.

The Department pays 75 per cent. of the building and equipment, and is responsible for staffing the Centre.

Various checks are imposed by the Department in relation to suitability of the site, plans and specifications, etc.

Because of the rapid growth of this State, and the increasing awareness of the value of Baby Health Centres, there is a constant demand for the establishment of new Centres.

The Department decides whether a Centre is warranted, and what position it takes for finance on a priority list.

With the lack of finance over the years and a policy of permitting Centres to be built on a piecemeal payment basis, a debt of £61,000 had accumulated by 1959.

The annual vote for the establishment of Centres had been approximately £40,000 per annum.

Applications for new Baby Health Centres numbered over three hundred, although approximately only ninety-five of these were warranted.

There were a further sixteen established Centres in inadequate and dilapidated premises.

With the passage of time and the expansion of the State, Centres previously not warranted have gone to the warranted class and application for new centres, particularly on Housing Commission projects, are ever increasing.

Through the personal efforts of the Minister for Health, the Hon. W. Sheahan, a Loan Vote allocation of £100,000 was made for Baby Health Centres for the financial year 1959-60.

The result of this was that the outstanding debts could now be paid and a further £40,000 used for the establishment or replacement of Centres.

During 1959 eight new Baby Health Centres were opened, and it is anticipated that thirteen new Centres will be established by 30th June, 1960.

(*b*) Staff

For many years there has been a staff shortage in Baby Health Centres.

Officers are required to be General Trained Nurses with a Mothercraft Certificate.

Recruitment of new staff has been negligible, and the average age of the existing staff in January, 1959, was fifty-four years.

One of the main difficulties is " Compulsory Country Service ". All Baby Health Centre Sisters are required to do periods of Country Service each of three years duration in any part of New South Wales.

To compensate in a measure for the disabilities so imposed, a Country Allowance of £100 per annum was introduced. This is paid at the end of each six months of completed compulsory Country Service.

From discussion with the staff, it has been determined that this is regarded as great benefit, and is an encouragement to Sisters to join the service.

The most progressive step for the recruitment of staff was made following the recommendation of the Organisation and Methods Survey, and is recorded under that heading.

Attendances at Baby Health Centres are shown under Table VII.

Table VII—Attendance at Baby Health Centres

The attendances for the year 1959, were as follows:—

	Metropolitan	Country	Total
Individual attendances	59,851	47,936	107,787
Total attendances	595,928	419,090	1,015,018
Number of Baby Health Centres as at 31st December, 1959	111	247	358

INFANTILE MORTALITY

The figures for infantile mortality from 1936—1959 are given below:—

Table VIII — Infantile Mortality, New South Wales

Period	Rate*	Year	Rate*
1936-1940	41·18	1955	24·86
1941-1945	35·95	1956	23·47
1946-1950	28·91	1957	22·70
1951-1955	25·11	1958	21·29
		1959	22·65

* Number of deaths of children under one year of age (excluding still births) per 1,000 live births.

The deaths in age groups are given in Table IX below:—

Table IX — Infant Mortality in Age Groups, New South Wales

Year	Age at Death							
	Under 1 Week	1 Week and under 1 Month	Total under 1 Month	1 Month and under 3 Months	Total under 3 Months	3 Months and under 6 Months	6 Months and under 12 Months	Total under one Year
	Number of Deaths							
1956	1,117	168	1,285	150	1,435	175	167	1,777
1957	1,136	166	1,302	152	1,454	168	182	1,804
1958	1,055	170	1,225	136	1,361	149	194	1,704
1959	1,166	158	1,324	141	1,465	192	175	1,832
	Rate per 1,000 Live Births							
1956	14·75	2·22	16·97	1·98	18·95	2·31	2·21	23·47
1957	14·30	2·09	16·39	1·91	18·30	2·11	2·29	22·70
1958	13·18	2·12	15·30	1·70	17·00	1·86	2·43	21·29
1959	14·42	1·95	16·37	1·75	18·12	2·37	2·16	22·65

The figures to 1958 are set out below in Table X:—

Table X—Causes of Death of Children under One Year of Age, New South Wales
Number of Deaths per 1,000 Live Births

Class No.	Cause of Death*	Metropolis		Remainder		New South Wales	
		1957	1958	1957	1958	1957	1958
1	Infective and Parasitic Diseases	·33	·38	·50	·47	·42	·42
2	Neoplasms	..	·08	·10	·05	·05	·06
3	Allergic Endocrine System, Metabolic and Nutritional Diseases	·05	·18	·12	·10	·09	·14
4	Diseases of the Blood and Blood-forming organs	..	·05	..	·05	..	·05
5	Mental Psychoneurotic and Personality Disorders	·15	·18	·07	·10	·11	·14
6	Diseases of the Nervous System and Sense Organs	·33	·20	·65	·47	·49	·34
7	Diseases of the Circulatory System	..	·13	·07	·10	·04	·11
8	Diseases of the Respiratory System	2·05	1·99	2·87	2·64	2·47	2·32
9	Diseases of the Digestive System	·75	·73	·77	1·11	·75	·92
10	Diseases of the Genito-Urinary System	·05	..	·02	·07	·04	·04
11	Deliveries and Complications of Pregnancy, Childbirth and the Puerperium.	..	..	..	..	..	..
12	Diseases of the Skin and Cellular Tissue	·10	·05	·02	·02	·06	·04
13	Diseases of the Bone and Organs of Movement	·08	·03	..	..	·04	·01
14	Congenital Malformations	4·21	3·97	3·36	3·41	3·78	3·69
15	Certain Diseases of Early Infancy	11·78	11·45	15·26	12·89	13·55	12·18
16	Symptoms, Senility and Ill-defined Conditions	·08	·08	·15	·12	·11	·10
17	Accidents, Poisoning and Violence	·44	·53	·96	·92	·70	·73
	Total, All Causes	20·40	20·03	24·92	22·52	22·70	21·29

* 1957 Deaths are classified according to the Sixth Revision (1948) of the International Classification of Diseases, and 1958 Deaths according to the Seventh Revision (1955).

No figures are, as yet, available in respect of the abovementioned categories for 1959.

Part III—General

ORGANISATION AND METHOD SURVEY

With the increasing activities of this Division over the last ten years, and the concomitant financial and staff problems, the amount of clerical work increased tremendously.

Prior to the " Organisation and Method " Survey the Clerical Staff of the Division consisted of one Clerical Officer (Grade I) and two Office Assistants.

A large percentage of the clerical work of the Division was done by the Medical Officers and Nurse Inspectors.

The result of this position was that the medical work of the Division was severely restricted and the inspection of Baby Health Centres had fallen to a minimum.

The Director requested an " Organisation and Method " Survey in order to obtain advice as to what should be done and a recommendation to the Department for implementation. The Survey was done by Mr. J. Holiday and Mr. W. Pilz of the Public Service Board with the assistance of Mr. Loughrey, Secretary of the Board of Health and Mr. L. Maher.

A full report of the findings of this Survey is available.

The immediate result was an increase in Clerical Staff to 1 Senior Clerk Grade V, 1 Clerk Grade II, 1 Incremental Clerk, 1 Stenographer, 2 Office Assistants.

Various recommendations as to methods of streamlining work etc., were suggested and over the year many of these have been implemented.

In relation to the recruitment of staff for Baby Health Centres the " Organisation and Method " Survey recommended, and the suggestion was adopted to introduce a new Bond Scheme for the training of Nurses.

Nurses who have a General Certificate but do not have a Mothercraft Certificate can now do the Mothercraft Course of four months training under bond to the Department.

They are paid full salary while training and agree to work for eighteen months in the Baby Health Centres after completion of the course.

This was a tremendous step forward in improving the staffing position.

Because of the extremely poor situation which existed plus the fact that only a limited number of Nurses can be trained each year, it will be some years before we can hope to have a complete staff. The improvement however is already evident as it is now possible to do away with the services of many of the ever-aged re-employed Officers.

The Nurse Inspectors are once again inspecting Centres and making contact with the members of the nursing staff, some of whom had not been seen for a number of years.

The Medical Officers are now engaged on medical work and the Director has been able to pursue lines of investigation hitherto impossible because of lack of trained staff.

STAPHYLOCOCCAL SURVEY

Staphylococcal infections of a certain type were declared notifiable in September, 1958.

Early in 1959 it was discovered that very few cases were being notified. On inquiry it was ascertained that there was a great deal of confusion as to what should be notified particularly in relation to " infants under four weeks ".

In order to clarify this " notification " problem and to attempt to assess the amount of infection in Maternity Hospitals, a survey was commenced.

This Survey fell broadly into two divisions:—

(*a*) The recording of infections occurring in mothers and infants.

(*b*) A review of facilities and procedures in Maternity Hospitals.

The Survey was a first confined to the Metropolitan Maternity Hospitals but later extended to all hospitals with over one thousand births per annum in New South Wales.

Smaller hospitals were also done if a high infection rate was experienced or a request was made to the Department for assistance.

This material is gradually being collected and compiled and the findings should be available towards the end of 1960.

The other activities of the Division such as:—

(1) Medical examination of Pre-school Children;

(2) Student Observation in Baby Health Centres;

(3) Visiting Premature Babies in thier homes;

(4) Broadcasts by Baby Health Centre Sisters;

(5) Food Relief;
(6) Departmental Booklets;
(7) Infant Feeding Notes;
(8) Lectures by Medical Officers to Kindergarten Union, Sydney Day Nursery and Nursery Schools Association, and assistants in nursing—Lidcombe State Hospital;

have continued as in previous years with very little variation.

Material is still being collected for the Infant Mortality Survey and it is anticipated that in 1960 the position will be reached where an analysis and conclusion can be made.

DIFFICULTIES ARISING DURING THE YEAR

Although not confined to the year 1959, two of the major difficulties besetting the Division are:—

(*a*) Assistance to Aborigines.
(*b*) The New Australian Mother.

Assistance to Aborigines

This Division conducts a Baby Health Centre Service to a number of Aboriginal Stations and Reserves.

In some cases this consists of a service in some form of accommodation, either a hall or Medical room and the Aboriginal Mothers come to the Sister.

In other cases the Sister goes from house to house in a car trying to help these mothers.

It is well known that there are many difficulties associated with caring for the Aborigines. It is the considered opinion of the Sisters attending these Centres, however, that the fault is not all on the part of the Aborigines.

Everyone is well aware of the problems which face the Aboriginal Welfare Board but the value of the Baby Health Centre Service is negated if a " follow-up " is not done.

A Sister goes to a station perhaps once a fortnight. The instructions she gives to the mothers are not always carried out.

It is the duty, usually, of the Station Manager's wife to check the children regularly and see that the Sister's advice is carried out.

This rarely, if ever, happens and the Sisters naturally feel that they are wasting their time.

During 1959 there were a number of deaths from, and many cases of whooping cough among the Aborigines from Burnt Bridge and Bellbrook, near Kempsey.

It would appear no concerted effort is made to immunize the Aboriginal children. At present, Sister Hack, Sister-in-Charge, Kempsey, is giving Triple Antigen to the Aboriginal children at Burnt Bridge and Bellbrook. This she does in her own time in association with an Aboriginal Welfare Committee in Kempsey.

Mantoux testing of Aborigines has been done with reasonable success. As this involves seeing the patients twice within seventy-two hours it is far more difficult than Triple Antigen and Polio.

It is not unusual for the Aborigines to go " walkabout " after the needle and a reading is difficult. Medical Officers from T.B. Division have been known to read a Mantous Test in a paddock or anywhere else where the Aborigines may have gone.

If it can be done with Mantoux Tests it seems feasible that similar sorts of " Teams " could be sent to the Aboriginal Station and Reserves, with the co-operation of the Aborigines Welfare Board, and Triple Antigen and Polio given.

It is not reasonable to expect the Aboriginal mothers to take their children to a local General Practitioner. Nor does it seem right that a Baby Health Centre Sister should be doing this work in her own time with the help of a local Committee.

The high death rate among Aboriginal babies is a constant source of anxiety to Officers of this Division.

In order to overcome this difficulty of the Aboriginals it is suggested:—

(*a*) That the Aboriginal Welfare Board be asked to ensure that the " follow-up " of the Baby Health Centre Service is done.
(*b*) In relation to Triple Antigen, perhaps a local Practitioner with the Baby Health Centre Sister could form a team, Triple Antigen and Polio to be supplied by this Department and the Aborigines could be immunized. These visits to be a regular occurrence so that all new babies receive, particularly, Triple Antigen. Under twelve months the Aboriginal child does not survive infectious diseases.

NEW AUSTRALIAN MOTHERS

Because of language difficulties the New Australian Mother presents a constant problem to Sisters in Baby Healh Centres.

There are many nationalities but those presenting the major problems are:—Italian, Maltese and Greek.

There were approximately twenty seven cases of Scurvy admitted to Childrens' Hospitals during 1959 and a large number of these babies were from New Australian Families.

Translations of diets (prenatal) and series of questions re health have been made. These however, have a limited application. The mother, if shown a question, replies in her own language which, of course, is not understood. Many cases exists of mothers particularly Greek and Italian who cannot read even their own language.

At present the Baby Health Centre Sisters rely on mime plus examples of food such as an orange, a tin of Farex etc., It is very slow and tiring and quite often unsuccessful. Some of the Baby Health Centres have a large quota of New Australians, places like Surry Hills, Fairfield, Dee Why.

An attempt is now being made to recruit trained Nurses for Baby Health Centres who are Europeans or who know several languages. To date this is not very successful, as the languages we need most urgently belong to Countries from which come very few trained persons.

This problem is complex and difficult, but one suggestion which would help in difficult and urgent cases would be the availability of interpreters. This suggestion might be examined.

It is anticipated that in 1960 translations might be made of simple statements in relation to feedings and general care of the baby. These however would only be useful to the mothers who can read.

E. Tuberculosis Division

REPORT OF THE DIRECTOR ON THE ACTIVITIES OF THE TUBERCULOSIS DIVISION DURING THE YEAR ENDED 31st DECEMBER , 1959

Director: Dr. Marshall Andrew.
Deputy Director: Dr. Keith W. H. Harris.

DEATHS AND NOTIFICATIONS

The number of deaths recorded as due to tuberculosis was 321 as against 190 for 1958.

Of these deaths 253 were males and 68 females.

These figures for deaths are uncorrected and do not take into account those that had been reported by the Registrar General's Department through the quarterly returns from the Bureau of Statistics and Economics, which returns are supplied to this Division up to six months after the completion of each particular quarter.

The figure for deaths as compiled by the Bureau of Statistics and Economics—the corrected figure—was 224, males 179, females 45.

The number of new cases of tuberculosis notified during 1959 was 1,166 or 233 less than the number recorded during 1958. With the exception of " Other " and " Death Certificate " sources of discovery, there was a general downward trend in the figures of new notifications.

The following Table A sets out the form and/or stage of disease of all new cases of tuberculosis notified in New South Wales during 1958, 1959.

Table A—New Cases of Tuberculosis in New South Wales 1958 *and* 1959—*Form and Stage of Disease*

Form and/or Stage of Disease	1958		1959	
	Number	Per Cent. of Total	Number	Per Cent. of Total
Pulmonary—				
Minimal	418	29·88	346	29·68
Moderately Advanced	692	49·46	540	46·31
Far Advanced	134	9·58	147	12,60
Not Stated	1	0·07	..	..
Extra-Pulmonary	52	3·72	39	3·35
Death Certificate*	102	7 29	94	8·06
Total	1,399	100·00	1,166	100·00

* Death certificate notifications represent cases which had not been notified prior to death.

There has been a general decrease in the number of pulmonary cases classified under the headings " Minimal " and " Moderately Advanced "—while there was a slight increase in the " Far Advanced " cases.

These sections though generally show a decrease of 211 or 14 per cent. on the 1958 figures.

As in 1958, approximately two-thirds of the " Far Advanced " cases were discovered by " Private Practitioners " and " Hospitals " who shared fairly equally in discovering 87 of the 147 of these cases. There has been a decrease in the percentage of " minimal " and " moderately advanced " cases discovered by mass chest X-ray survey, the percentages for these stages in 1959 being minimal 32 per cent., moderately advanced 34 per cent., as compared with over 40 per cent. and almost 50 per cent. respectively for 1958.

The cause of the falling off of the numbers of new cases discovered from this source, has been attributed firstly to complacency of some members of the general public who consider that tuberculosis has been completely beaten, and who accordingly do not attend for X-ray at the surveys, and secondly to the scare which was first engendered by ill-advised newspaper reports concerning the risk of X-radiation.

A fact finding survey has been undertaken in an endeavour to more accurately pin-point the exact reason for the failure of the public more recently to attend the mobile X-ray units, when surveys are conducted in the various Metropolitan and Country Areas, but to date the final report has not been received.

Further details of notifications are set out in Table I of the Statistical Appendix.

X-RAY SECTION

During 1959, the number of X-rays taken by this Division was 239,827, or a rise of 2,133 when compared with 1958.

Table A below sets out a summary of the work performed by this Section during 1959, compared with 1958.

Table A—Micro-film Examinations

	Number of Films		No. per 100 Micro-films	
	1958	1959	1958	1959
Normal	231,874	233,521	97·41	97·35
Technical Faults	1,695	1,519	0·65	0·63
Probable Abnormalities*	4,125	4,787	1·94	2·02
Total	237,694	239,827	100·00	100·00

* Not all probable abnormalities are re-rayed.

The compulsory mass radiological surveys carried out were second and third round surveys, and the following Shires and Municipalities were examined:—

Second Round Surveys—

Jerilderie Municipality, Berrigan Shire, Cooma Municipality, Shire of Snowy River, Young Municipality, Burrangong Shire, Eurobodalla Shire.

Third Round Surveys—

City of Greater Wollongong, Shire of Colo, Blaxland Shire, City of Lithgow, Penrith Municipality, Windsor Municipality, Willoughby Municipality, Lane Cove Municipality, North Sydney Municipality, Mosman Municipality.

In addition mass X-ray examinations of the Mental Hospitals and Gaols in the area of the State covered by this Division's mobile units were completed, crews of the Orient Steamship Company's ships were chest X-rayed, and X-ray examination of the National Service Trainees was undertaken prior to the abandonment of the National Service Scheme.

Two thousand three hundred and seventy-seven crew members of the Orient Steamship Company's vessels were examined, and 944 Service Trainees. Several active cases of tuberculosis being found amongst the crew members.

A summary of the results of the Mass X-ray Surveys during 1959 is set out in Table II of the Statistical Appendix, and the same results divided into Statistical Divisions appear in Table III of the Appendix.

Up to 31st December, 1959, almost 4,333,000 X-rays have been taken during compulsory community wide X-ray surveys by this Division, and the Anti-Tuberculosis Association of New South Wales since the commencement of these surveys in 1954. From these over 3,400 new active cases of tuberculosis were discovered.

Table B, below sets out briefly the number of X-rays taken since the commencement of the campaign.

Table B—Number of X-rays taken from 1954 to 1959

Areas	First Round (*a*)			Second Round			Third Round			Fourth Round		
	Department Public Health	Anti-Tuberculosis Association	Total	Department Public Health	Anti-Tuberculosis Association	Total	Department of Public Health	Anti-Tuberculosis Association	Total	Department of Public Health	Anti-Tuberculosis Association	Total
Metropolitan	179,358	891,560	1,070,918	383,413	667,179	1,050,592	175,906	431,762	607,668	......	96,659	96,659
Newcastle (*b*)	......	131,596	131,596	......	127,942	127,942	......	84,706	84,706	......	......	......
Wollongong (*c*)	62,476	......	62,476	68,355	......	68,355	72,551	......	72,551	......	......	......
Other Country	351,674 (*d*)	357,442	709,116 (*d*)	56,827	178,551	235,378	15,031	......	15,031	......	......	......
	593,508 (*d*)	1,380,598	1,974,106 (*d*)	508,595	973,672	1,482,267	263,488	516,468	779,956	......	96,659	96,659

Grand Total of 1st, 2nd, 3rd and 4th Rounds

Metropolitan Area	2,825,837
Newcastle Area	344,244
Wollongong Area	203,382
Other Country Areas	959,525
	4,332,988

(*a*) Excluding approximately 40,000 X-rays in the first survey of Bankstown Municipality, accurate figures of which are not available. (*b*) Comprising City of Newcastle and Shires of Lake Macquarie and Lower Hunter. (*c*) Comprising City of Greater Wollongong and Municipality of Shellharbour. (*d*) Including first round survey of Broken Hill, which was carried out by the Commonwealth Department of Health.

EPIDEMIOLOGY SECTION

During the year 1959, the Epidemiology Section continued to carry out Mass and Special Tuberculin Surveys in New South Wales. B.C.G. Vaccination was limited to National Service Trainees, Aborigines, Contacts and those at risk.

The total figures are set out in Table IV of the Statistical Appendix—there is as usual a lag of six months in these figures, as that time is necessary to complete a full report of each district surveyed.

FIELD SURVEYS

These included country areas in the Central Districts, North West and North Western Slopes, the Snowy River Area, Young, Jerilderie, Berrigan, the City of Greater Wollongong and the Shoalhaven and Eurobodalla Shires, as well as many City and Metropolitan Areas,

The Epidemiology Mantoux Surveys preceded the Mobile X-ray Units of the Division and those of the Anti-Tuberculosis Association in order that the positive reactors amongst those tested might be speedily and conveniently X-rayed.

From the figures provided it will be noted that less schools were tested in 1959, but the total number tested was greater than in 1958. These figures also disclose that fewer cases with active disease were found, but more with inactive disease and other abnormalities were found in 1959 than 1958.

NATIONAL SERVICE TRAINEES

A decrease occurred in the number tested and vaccinated due to the discontinuation of the National Service Scheme during the year.

ABORIGINES

Areas where aborigines were tested and vaccinated included Walgett, Brewarrina, Moree, Coonabarabran, Peak Hill and Wade Shire. The Positive Reactor Rate was 26·9 per cent. compared with 40·7 per cent. in 1958. These comparative figures are of little value as the testing is over a wide age group, and the ages given by the older aborigines are not reliable. In the future an attempt will be made to obtain a 17 to 20 age group figure.

It has been found unwise to single out the aboriginal child for B.C.G. vaccination in the schools due to resentment by the parent. These children are, as far as possible, vaccinated at Stations and on Reserves.

CONTACTS AND THOSE AT RISK

The increase in numbers tested and vaccinated in these categories was due to the extension of surveys to Agricultural Workers, Students and Trainee Priests at various seminaries.

Medical students and nurses beginning their clinical work are tested and vaccinated each year.

TRAINEE TEACHERS AND COMMONWEALTH SCHOLARS

Tuberculin testing of the above groups as recommended by the Tuberculosis Advisory Committee was commenced. Results were not completely satisfactory due to the lack of sufficient notice for the inauguration of the project.

Positive reactor rates of the above group (young adults) and the Mass School Surveys were:—

School Entrants	2·58 per cent.
17-20 Age Group	19·7 per cent.
Primary School—(Group 5-12 years—City Area)	6·1 per cent.

This latter figure should be a basis for comparison in all surveys.

CONVERSION RATES

In various districts of 379 B.C.G. vaccinated, a conversion rate of 95·5 per cent. was obtained. In some districts the vaccinations were carried out on Aboriginal Reserves in brilliant sunshine, where it was difficult to protect the vaccine from the light.

PILOT SURVEY—WADE SHIRE

In the Wade Shire a Pilot Tuberculin Survey was carried out in November, 1959. Final results are not yet available, but those to hand indicate a lack of interest in the 14-22 and those over 55 age groups.

University Students, Trainee Teachers and Commonwealth Scholars in the 14-22 age group are always a non-co-operative group, possibly asserting the escape from home control.

Table V of the Statistical Appendix gives results in respect of this Pilot Survey.

FUTURE PLAN

(1) To continue tuberculin testing of school children, with particular attention to the school entrant and the school leaver.

(2) To continue tuberculin testing of Teachers' College Trainees and Commonwealth Scholars

(3) To continue tuberculin testing of all available University students.

(4) To continue tuberculin testing and vaccinating of Contacts, those at Risk and Aborigines.

(5) To continue the Follow-up of Positive Reactors and their household contacts.

(6) To carry out B.C.G. conversion tuberculin surveys on the vaccinated groups.

(7) To carry out Pilot Tuberculin Surveys in specified areas.

VISITING NURSING SERVICE

The staff of this Section remains the same as last year—two medical officers and twenty-eight nurses who carry out treatment, contacts, X-ray follow-up and Public Health visiting duties.

Thirteen of the nursing staff are permanently attached to a Metropolitan Area or hospital chest clinic, two are used to provide relief for Metropolitan and Country Sisters, and thirteen are attached permanently to country hospital chest clinics.

Chest Clinics are conducted by Divisional nurses at Manly, Parramatta, St. George and St. Vincent's Hospitals in the Metropolitan Area, and at Albury, Bathurst, Cessnock, Dubbo, Grafton, Kempsey, Lismore, Lithgow, Newcastle, Orange, Tamworth, Wagga and Wollongong in Country Areas. In addition sub-chest clinics are conducted at Ballina, Bathurst, Bodington Red Cross Hospital, Wentworth Falls, Casino, Coff's Harbour, Cootamundra, Corowa, Gilgandra, Griffith, Gunnedah, Kyogle, Leeton, Macksville, Maclean, Moruya, Murwillumbah, Nowra, Nyngan, Peak Hill, Quirindi, Tumut, Wellington, and Wauchope.

Liaison is also maintained with other chest clinics and hospitals in the Metropolitan Area at Randwick Chest Hospital, Repatriation General Hospital, Lady Davidson Home, Royal Alexandra Hospital for Children, Anti-Tuberculosis Association, Royal North Shore, Royal Prince Alfred Hospital and Canterbury District Hospital, and in the country at Armidale and Broken Hill.

British and foreign migrants were visited during the year and arrangements were made for X-ray and skin testing of these people. Visits were also made to various people by request of the Medical Research Council, England, for B.C.G. follow-up.

Reports were prepared in connection with the housing needs of tuberculosis patients.

A decrease in the number of patients requiring Streptomycin injections was recorded during 1959 compared with 1958.

Follow-up of persons with abnormal X-rays was systematised. The Sisters of the Visiting Nurse Section co-operated in the efficient carrying out of this work by visiting such persons, and where necessary referring them to a private medical practitioner or to a clinic. Results of those who attended a clinic were also obtained by these Sisters.

An increase in the number of " contacts " visited was recorded due to follow-up of:—

(1) Mantoux positive reactors notified by the Royal Alexandra Hospital for Children, and by several other sources.

(2) These notified by the Bureau of Statistics and Economics (deaths from tuberculosis for which no previous notification had been received).

(3) Notification of " Doubtfully Active " cases.

Skin testing of several Metropolitan Psychiatric Hospitals was carried out by the nursing staff, and B.C.G. vaccination was given to the negative reactors by a medical officer of the section.

Skin testing of certain contacts in their private residences was also carried out, due to their being unable or unwilling to attend a clinic. Most of these persons resided in remote areas. Interstate and overseas transfers in were visited and arrangements made for them to attend clinics.

Since July, 13th, 1959, all admissions to Randwick Chest Hospita have been arranged through this section controlled by Dr. Lawrence, and many admissions to other institutions have also been arranged. One hundred and seventy-four admissions were arranged between July and December, 1959—a monthly average of twenty-nine patients.

Total visits carried out by this Section was 28,159 or 5,105 less than in 1958. More time was, however, required to be spent in the clinic due to—

(1) An increase in the number attending.

(2) The collection and recording of information for clinical cards and X-ray follow-up.

Table VI and VII of the Statistical Appendix set out figures in respect of this Section.

TUBERCULOSIS ALLOWANCE SECTION

Table VIII of the Statistical Appendix summarises the work performed by this Section over the last five years.

There has been an increase of eighteen in the number of original applications for the Tuberculosis Allowance, compared with a decrease of 233 in the number of new cases notified during 1959, as compared with 1958.

Terminations at 650 are 102 less than 1958. Cases in pay at the end of the year at 908, are 93 more than for 1958.

Hospitals, Sanatoria and Clinics

Table IX and X of the Statistical Appendix sets out details of the number of patients treated by the various hospitals, sanatoria and clinics during the year ended 30th June, 1959. The figures for hospitals cover only those which have accommodation specifically set aside for the treatment of tuberculosis.

A total of 5,458 persons were treated as in-patients in these institutions during 1958-59, of whom 872 were still hospitalised at 30th June, 1959.

In all, tuberculous patients occupied an average of 779 beds per day, equivalent to 326,000 occupied bed days during 1958-59.

There were 359 available beds unoccupied at these institutions at 30th June, 1959, but 55 of the occupied beds were utilised for other than true tuberculosis sufferers—see " C " in Table VII of Statistical Appendix.

No new bed units were opened during 1958-59. Further delay occurred in the opening of the unit at St. Vincent's Hospital (It was not officially opened until May, 1960). This unit will accommodate a further 100 patients.

New out-patients sub-clinics were opened at Moruya, Nowra, Leeton, Cootamundra, Corowa, Wellington, Nyngan, Peak Hill, Coff's Harbour, Maclean and Macksville.

During 1958-59 there was a decrease of 3,687 persons on the clinic register throughout the State, giving a total of 31,579 persons attending clinics, excluding the Repatriation Department out-patients, figures for which have not been received.

The number of attendances by patients and their contacts (again excluding Repatriation Department) was approximately 184,000.

Over 122,000 X-ray examinations and approximately 65,000 bacteriological examinations were carried out, and over 700 new active cases were diagnosed in the clinics. These figures also exclude Repatriation details, and the latter figure does not agree with the corresponding figure in Table I. of this Statistical Appendix. This apparent disparity is accounted for by the fact that many cases of tuberculosis are referred to the Chest Clinics for final diagnosis by private medical practitioners, and from the mobile chest X-ray units, and the source of discovery as recorded in Table I, is of course then credited to the referring body.

Routine X-raying of Hospital Patients

At 31st December, 1959, twenty-three country and Metropolitan public hospitals were X-raying their patients as a routine procedure, and it is anticipated that a further seven hospitals will commence this service in the near future.

Hospital patients are still regarded as a significant group as a convenient source from which information is readily available for any case finding programme, at those hospitals where routine X-rays are carried out. The objective is to ultimately have all public hospitals carry out routine X-rays of both in and out-patients on admission, or on the first visit to the out-patients clinic.

During the year approximately 65,000 hospital patients were X-rayed, and to date 1,235 new active cases of tuberculosis have been discovered.

Rehabilitation

Rehabilitation of persons in receipt of the Tuberculosis Allowance is catered for by a panel consisting of the Director of Tuberculosis for New South Wales, as Chairman, Dr. Glick (Medical Officer Commonwealth Rehabilitation Branch), the Education and Training Officer of the Rehabilitation Section of the Commonwealth Department of Social Services, and a representative from the Commonwealth Employment Services.

At the panel meetings, the medical officer in charge of each case, when available, and the almoner or social worker at the clinic or hospital concerned, are co-opted for advice and any additional information they may have regarding the person concerned.

In the seven years ended 31st December, 1959, a total of 584 Tuberculosis Allowance cases were placed in employment, while 389 completed courses of training. Of the twenty-four placed in employment during the year ended 31st December, 1959, thirteen did not receive any rehabilitation training.

During the year ended 31st December, 1959, twenty-four were admitted to Rehabilitation Centres in the State, and fourteen completed training.

Rehabilitation Centres are conducted by the Commonwealth at Mount Wilga, by N.A.P.T.A. at Crow's Nest, and the Citizens' T.B. League at Rozelle.

TABLE I—NOTIFICATIONS OF NEW CASES OF TUBERCULOSIS DURING YEAR ENDED 31ST DECEMBER, 1959—NEW SOUTH WALES

	Stage of Disease												Total		
	Pulmonary								Extra-Pulmonary		Death Certificate				
	Minimal		Moderately Advanced		Far Advanced		Not Stated								
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	P.
	SOURCE OF DISCOVERY														
Private Practitioner	51	25	91	38	35	13	..	..	10	9	..	..	187	85	272
Chest Clinic	31	25	46	29	14	6	..	..	..	..	..	..	91	60	151
Sanatorium	1	..	3	..	..	1	..	..	..	..	..	..	4	1	5
Hospital	26	21	64	28	27	12	..	..	6	11	..	..	123	72	195
Repatriation Dept.	12	1	19	1	1	..	..	..	1	..	..	..	33	2	35
Contact Follow-up	5	5	6	2	1	1	..	..	..	1	..	..	12	9	21
Mantoux Testing	6	2	1	2	1	..	..	..	..	..	..	..	8	4	12
Mass X-Ray Survey—															
Health Dept.	29	13	29	15	4	1	..	..	..	..	..	..	62	29	91
Anti-T.B. Assoc.	41	28	96	46	19	2	..	..	1	..	..	..	157	76	233
Other	20	4	21	3	9	..	..	..	..	..	..	..	50	7	57
Death Certificate	..	..	..	..	..	..	..	..	..	..	62	32	62	32	94
Total	222	124	376	164	111	36	..	..	18	21	62	32	789	377	1166
	AGE-GROUP (YEARS)														
Under 1	3	..	..	1	..	..	..	..	..	..	..	..	3	1	4
1–4	8	6	4	1	..	1	..	..	4	10	..	2	16	20	36
5–9	4	2	..	..	1	..	..	..	2	1	..	..	7	3	10
10–14	2	2	1	..	..	..	..	..	..	1	..	..	3	3	6
15–19	7	6	3	6	1	..	..	..	1	..	1	..	13	12	25
20–24	18	8	18	10	..	1	..	..	..	1	..	1	36	21	57
25–29	14	18	19	13	3	1	..	..	2	..	..	..	38	32	70
30–34	19	22	38	20	8	3	..	..	1	2	2	2	68	49	117
35–39	30	15	30	20	4	..	..	..	..	1	1	3	65	39	104
40–44	20	9	28	22	9	5	..	..	1	..	3	1	61	37	98
45–49	21	10	47	17	12	5	..	..	1	2	4	2	85	36	121
50–54	19	12	37	10	20	8	..	..	1	1	6	2	83	33	116
55–59	21	4	47	13	10	2	..	..	1	..	3	3	82	22	104
60–64	15	3	36	15	12	2	..	..	2	1	8	4	73	25	98
65–69	7	2	28	9	8	2	..	..	2	..	14	4	59	17	76
70–74	5	3	23	4	11	2	..	..	..	..	10	3	49	12	61
75 and over	8	2	15	3	12	3	..	..	..	1	10	5	45	14	59
Not Stated	1	..	2	..	..	1	..	..	..	..	..	..	3	1	4
All Ages	222	124	376	164	111	36	..	..	18	21	62	32	789	377	1166

TABLE II — DEPARTMENT OF PUBLIC HEALTH — COMMUNITY WIDE X-RAY SURVEY

	First Round	Second Round	Third Round	Total
1. Year ended 31st December, 1959—				
(*a*) Number of Micro films—				
(i) Metropolitan Area	....	..	81,321	81,321
(ii) Country Area	....	23,210	87,582	110,792
	....	23,210	168,903	192,113
(*b*) Estimated population aged 14 years and over in areas surveyed—				
(i) Metropolitan Area	....	....	127,490	127,490
(ii) Country Area	....	23,550	92,250	115,800
	....	23,500	219,740	243,290
(*c*) Number of new active cases—				
(i) Metropolitan Area	....	....	20	20
(ii) Country Area	....	14	23	37
	....	14	43	57
(*d*) Number of cases still under investigation—				
(i) Metropolitan Area	....	....	94	94
(ii) Country Area	....	15	244	259
	....	15	338	353
2. Total since commencement of campaign—				
(i) Total number of micro films	593,508	508,595	263,488	1,365,591
(ii) Number of new active cases	249	174	58	481
(iii) Number of cases still under investigation	....	15	338	353

Table III—Chest X-ray Surveys completed during 1959, by Statistical Divisions, etc.

Divisions	Number of Micro-film Examinations	Estimated Total Potential (Persons)	Coverage (Per cent.)	Technical Faults		Probable Abnormalities Requiring re-ray		Active T.B. Diagnosed			Cases of Inactive T.B. Diagnosed	Other Abnormalities Detected	Cases Still Under Investigation
								Previously Known Cases	New Cases				
				Number	Per 100 Micros	Number	Per 100 Micros		Number	Per 10,000 Micros			
Mass Community Surveys—													
Cumberland	81,321	127,490	63·8	483	0·59	1,404	1·72	..	20	2·45	186	330	94
South Coast	76,131	83,150	91·5	528	0·69	1,497	1·96	..	21	2·75	189	368	237
South Western Slope	6,653	5,000	133·6	14	0·21	106	1·59	..	1	1·50	23	45	1
Central Tableland	15,031	12,700	118·3	44	0·29	328	2·11	..	7	4·65	32	87	14
Southern Tablelands	8,724	11,300	77·2	51	0·58	151	1·72	..	5	5·73	36	41	6
Riverina	4,253	3,650	116·5	11	0·25	65	1·52	..	3	7·05	20	26	1
Total	192,113	243,290	78·1	1,131	0·58	3,551	1·84	..	57	2·96	486	897	353
Chest X-ray Centre	28,877	..	..	234	0·81	609	2·10	2	33	11·42	249	236	40
Special Groups	17,893	..	..	142	0·79	621	3.47	..	11	6·14	75	110	147
National Service Trainees	944	..	..	2	0·21	6	0·63	..	..	..	..	1	2
Total all Surveys	239,827	..	..	1,509	0·63	4,787	1·91	2	101	4·21	810	1,244	542

TABLE IV—EPIDEMIOLOGY SECTION

	Year ended June, 1958	Year ended June, 1959
Field Surveys—		
No. of Schools visited	851	632
No. of pupils tested	123,722	149,936
No. of positive reactors	18,411 + 626 due to BCG	13,154 + 413 due to BCG
No. vaccinated	......	......
Total No. X-rays	50,558	40,026
No. of persons with active Tuberculosis ..	29	22
No. of persons with inactive Tuberculosis	231	238
No. of persons with other Abnormalities ..	183	197
National Service Trainees—		
No. tested and read	3,748	3,316
No. positive reactors	746 + 951 due to BCG	564 + 1,251 due to BCG
No. vaccinated	2,026	1,345
Others (Contacts and Those At Risk)—		
No. tested and read	131	1,408
No. positive reactors	24	381 + 328 due to BCG
No. vaccinated	76	107
Aborigines—		
No. tested and read	1,854	1,971
No. positive reactors	756	527 + 19 due to BCG
No. vaccinated	949	1,134
Trainee Teachers—		
No. tested and read	......	1,347
No. positive reactors	......	294 + 195 due to BCG
Australian positive reactor rate	......	21·8%
Commonwealth Scholars—		
No. tested and read	......	1,190
No. positive reactors	......	297 + 189 due to BCG
Australian positive reactor rate	......	25·9%
Mantoux Conversion Rate—		
No. tested and read	......	379
No. positive reactors	......	362
Positive reactor rate	......	95·5%
Australian School Entrant. 5-6 Years—		
No. tested and read	......	6,736
No. positive reactors	......	174
Positive reactor rate	......	2·58%
Australian School Leaver. 17-20 Years —		
No. tested and read	......	1,100
No. positive reactors	......	217
Positive reactor rate	......	19·7%
Primary School Group. 5-12 Years—		
No. tested and read	......	49,688
No. positive reactors	......	3,043
Positive reactor rate	......	6·1%

TABLE V—SHIRE OF WADE—AUSTRALIAN

Age Group Reactor Rates

Tuberculin Testing 30th November, 1959

Age	Total Tested and Read	Positive	Positive Reactor Rate	Age	Total Tested and Read	Positive	Positive Reactor Rate
			per cent.				per cent.
1 year	77 + 1 BCG	+ 1 BCG	..	1 year	2	....	....
1–2 years	94	1	1·06	1–2 years	....	....	....
2–3 years	157 + 2 BCG	9 + 2 BCG	5·7	2–3 years	3	....	....
3–4 years	149	5	3·3	3–4 years	1	....	....
4–5 years	153 + 1 BCG	5 + 1 BCG	3·3	4–5 years	3	....	....
5–6 years	447	13	2·9	5–6 years	13	....	....
6–7 years	426 + 7 BCG	20 + 7 BCG	4·7	6–7 years	33	4	12·1
7–8 years	383 + 4 BCG	22 + 4 BCG	5·7	7–8 years	35	1	2·8
8–9 years	343 + 2 BCG	16 + 2 BCG	4·6	8–9 years	49	6	12·2
9–10 years ..	288 + 1 BCG	23 + 1 BCG	7·9	9–10 years ..	62	9	14·5
10–11 years ..	282 + 1 BCG	21 + 1 BCG	7·4	10–11 years ..	67	7	10·4
11–12 years ..	287 + 1 BCG	29 + 1 BCG	10·1	11–12 years ..	62	7	11·2
12–13 years ..	117	33	28·2	12–13 years ..	34	2	5·9
13–14 years ..	163 + 1 BCG	19 + 1 BCG	11·6	13–14 years ..	15	....	....
14–15 years ..	86	16	18·6	14–15 years ..	7	1	14·3
15–16 years ..	59 + 1 BCG	6 + 1 BCG	10·2	15–16 years ..	16	3	18·7
16–17 years ..	21 + 3 BCG	5 + 3 BCG	23·8	16–17 years ..	9	1	11·1
17–18 years ..	37 + 1 BCG	9 + 1 BCG	24·3	17–18 years ..	6	1	16·6
18–19 years ..	36 + 12 BCG	12 + 12 BCG	33·3	18–19 years ..	9	5	55·5
19–20 years ..	35 + 16 BCG	21 + 16 BCG	60·0	19–20 years ..	10	9	90·0
20–21 years ..	50 + 3 BCG	12 + 3 BCG	24·0	20–21 years ..	10 + 2 BCG	3 + 2 BCG	30·0
21–22 years ..	60 + 5 BCG	20 + 5 BCG	33·3	21–22 years ..	12	5	41·7
22–25 years ..	246 + 14 BCG	84 + 14 BCG	34·1	22–25 years ..	63	33	52·4
26–30 years ..	328 + 9 BCG	111 + 9 BCG	33·8	26–30 years ..	111 + 1 BCG	57 + 1 BCG	51·3
31–35 years ..	392 + 1 BCG	154 + 1 BCG	38·7	31–35 years ..	147 + 1 BCG	83 + 1 BCG	56·5
36–40 years ..	291 + 1 BCG	125 + 1 BCG	42·9	36–40 years ..	140	105	75·0
41–45 years ..	235	110	46·8	41–45 years ..	92	61	66·6
46–50 years ..	159	80	50·3	46–50 years ..	93	69	74·2
51–55 years ..	106	60	56·6	51–55 years ..	83	70	84·3
56–60 years ..	68	32	47·06	56–60 years ..	70	59	84·3
61–65 years ..	49	20	40·8	61–65 years ..	33	27	81·8
66–70 years ..	17	11	64·7	66–70 years ..	20	9	45·0
71–75 years ..	14	11	78·6	71–75 years ..	14	11	78·6
76–80 years ..	7	6	85·7	76–80 years ..	4	4	100·0
81–86 years ..	3	..	....	81–86 years ..	2	2	100·0
Age not stated ..	30	3	10·0	Age not stated ..	17	1	5·9
Total	5,695 + 87 BCG	1,124 + 87 BCG	19·7	Total	1,347 + 4 BCG	655 + 4 BCG	48·6

TABLE VI

1959

	January	February	March	April	May	June	July	August	September	October	November	December
1 No. of working days spent at Clinic	66¼	77¾	79	71	85	73	96	87½	71¾	70	73	65½
2 No. of cases receiving Streptomycin	128	173	151	114	96	102	135	209	111	122	164	108
3 No. of visits to cases receiving Streptomycin	1,402	1,337	1,408	1,328	1,094	1,189	1,058	1,039	1,250	1,227	1,252	1,289
4 No. of visits for dressings	123	115	140	142	133	163	156	166	186	191	211	203
5 No. of visits made at the request of this division other than Streptomycin or dressings	721	713	530	669	670	770	726	698	900	937	844	842
6 No. of visits made at request of other Doctors, Clinics, etc.	230	190	123	192	187	205	221	148	154	138	133	80
Total	2,476	2,355	2,291	2,332	2,088	2,337	2,392	2,051	2,490	2,493	2,440	2,414

Total Visits: 28,159.

TABLE VII—CLASSIFACTION OF NOTIFICATIONS JANUARY—DECEMBER, 1959

Active Cases	963
Inactive Cases	108
Doubtful Active	29
Extra Pulmonary Cases	72
Non Tuberculous	28
New Cases not Previously Notified	1,172
Not Tuberculous	28

Renotification

(*a*) Breakdown	146
(*b*) Always active	55
(*c*) Inactive	41
Total Number of Renotification Cases	242

On the first page of the Annual Report for 1959, it will be noted that the number of new cases of tuberculosis notified during 1959, is shown as 1,166. This figure does not agree with the figure of 1,172 shown above, and the variation can be explained by the fact that notifications which were received at 697 George Street, were not included in the figure as shown by the Case Register Section, whose figure is 1,166, for 1959.

There will be in future no variation in total notification figures in that the Case Register Sections which operated separately at 697 George Street and 86 George Street have now been amalgamated.

TABLE VIII

Applications for T.B.A.	1955	1956	1957	1958	1959
Action incomplete at end of previous year	..	20	28	40	19
New applications	1,175	1,023	824	643	661
Renewals	209	206	157	132	121
	1,384	1,249	1,009	815	801
Approvals	1,234	1,123	999	795	716
Refusals	73	53	52	36	11
Not proceeded with	15	3	..	4	..
Action incomplete	20	28	40	8	39
	1,342	1,207	1,091	843	766
Terminations	1,893	1,486	865	752	650
Cases in pay at end of year ..	1,878	1,503	1,119	815	908

TABLE IX—IN-PATIENTS

Hospital	Number of In-patients					Occupied Bed Days	Daily Average No. of Occupied Beds	Average Duration of Stay (Days) *	Number of Beds at 30th June, 1959		
	At 1st July, 1958	Discharged 1958-59	Died 1958-59	Admitted 1958-59	At 30th June, 1959				Occupied	Unoccupied	Total
Anti-T.B. Association	10	226	3	219	..	3,549	9·72	15.5	Closed during June, 1959		
Albury District	13	28	2	27	10	4,953	13·56	105	10	13	23
Armidale District						No Thoracic Unit					
Ballina						No Thoracic Unit					
Broken Hill						No Thoracic Unit					
Canterbury	15	98	4	109	22	8,078	22·13	66	22	3	25
Casino						No Thoracic Unit					
Cessnock Joint Coal Board						No Thoracic Unit					
Cowra						No Thoracic Unit					
Dubbo	9	26	..	24	7	3,135	8·59	120·57	7	3	10
Grafton	8	37	..	19	..	184	0·50	68	..	10	10
Griffith						No Thoracic Unit					
Gunnedah						No Thoracic Unit					
Kempsey						No Thoracic Unit					
Kyogle						No Thoracic Unit					
Lidcombe State	32	95	13	112	36	14,569	39·89	118	36	35	71
Lithgow Joint Coal Board						No Thoracic Unit					
Lismore Base	4	19	..	23	8	2,331	6·39	27·4	8	2	10
Lourdes	18	39	3	40	16	6,027	16·51	143	16	2	18
Manly	4	61	8	76	11	3,403	9·32	44·7	11	4	15
Moruya						No Thoracic Unit					
Murwillumbah						No Thoracic Unit					
Nowra						No Thoracic Unit					
Orange	2	9	..	9	2	493	1·35	55	No set number of beds for T.B.		
Parramatta	16	117	6	120	13	5,045	13·82	41	13	3	16
Picton Lakes	17	27	1	27	16	5,423	14·85	148·9	16	16	32
Port Macquarie	..	1	..	1	..	5	0·01	5	..	..	..
Q.V.H. Picton	56	190	..	213	79	23,938	65·53	123·41	79	25	104
Randwick Chest	204	205	56	220	163	68,784	188·45	422	163	63	226
Rankin Park	58	229	12	249	66	24,183	66·25	78·8	66	48	114
R.G.H. Concord	206	1,205	69	1,216	148	66,638	185·31	52·7	148	10	158
Lady Davidson Home	37	114	3	151	74	11,474	31·44	101	74	4	78
Royal Alexandra	16	56	..	53	13	5,622	15·4	81·48	13	15	28
Royal Newcastle						No Thoracic Unit					
Royal North Shore	50	588	24	606	44	19,096	52·32	33	99†	1	100
P.J. Annexe	40	163	..	196	70	18,873	51·71	71	70	30	100
Royal Prince Alfred	65	682	22	667	38	19,439	53·26	33 51	38	62	100
St. George	14	59	6	63	12	4,682	12·83	72	12	3	15
St. Vincent's						No Thoracic Unit at end of 1959					
Tamworth	7	22	1	24	8	1,281	3·51	413	8	12	20
Wagga	6	29	1	35	11	3,001	8·22	107·18	11	..	11
Wollongong	5	39	3	47	5	2,076	5·69	49·43	5	5	10
Total	912	4,364	237	4,546	872	326,282	779·27	99·87	925†	369	1,274

* Discharges and deaths only.

† Includes beds occupied by other than T.B. sufferers.

Table X—Out-patients

Hospital	Number of T.B. Patients			Number of Patients and Contacts (Attendances)	X-rays Taken		Bacteriological Examinations	New Cases Diagnosed	
	At 1st July, 1958	Registered (New)	At 30th June, 1959		Micro	Large		Active	Inactive
Anti-T.B. Association	22,848	2,066	18,506	112,192	43,452	15,458	28,259	393	1,902
Albury	76	28	104	2,471	271	957	..	..	..
Armidale	15	197	22	291	82	480	25	2	..
Ballina	..	3	3	64	..	35	3	..	..
Broken Hill	44	6	13	297	..	240	26	..	6
Canterbury	977	184	1,161	15,061	1,477	5,049	536	48	136
Casino	8	1	9	253	..	141	10	..	..
Cessnock Joint Coal Board	1,923	52	1,986	1,053	..	403	305	2	9
Cowra	..	19	19	375	..	..	27	..	..
Dubbo	100	10	108	1,616	736	325	212	8	..
Grafton	37	10	46	1,245	313	122	268	3	..
Griffith	..	4	4	78	..	37	1	1	..
Gunnedah	..	..	11	66	..	17	26	2	1
Kempsey	30	5	35	1,013	..	755	168	..	..
Kyogle	3	2	5	108	..	56	6	..	..
Lidcombe					No outpatients				
Lithgow Joint Coal Board	49	9	43	329	..	164	63	1	42
Lismore	55	31	86	980	..	..	50	10	13
Lourdes					No outpatients				
Manly	508	32	402	3,122	..	1,776	534	11	13
Moruya	..	37	37	66	..	11	..	..	..
Murwillumbah	11	15	26	364	..	236	24	5	..
Nowra	..	21	21	21	..	21	..	..	..
Orange	103	35	125	1,149	70	821	90	2	..
Parramatta	588	253	841	8,574	1,119	2,061	1,121	70	94
Port Macquarie	6	1	7	101	268	..	15	..	..
Q.V.H. Picton	16	1	17	29	..	1,026	22	..	..
Randwick	311	25	336	1,309	..	878	3,399	2	..
R.G.H. Concord *									
Lady Davidson Home	2	..	1	..	..	..	..	..	..
Royal Alexandra	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Royal Newcastle	1,708	125	1,605	7,902	547	11,755	4,234	15	90
Royal North Shore	1,865	323	2,076	8,942	..	4,337	1,113	15	199
Royal Prince Alfred	1,304	62	975	4,787	11,771	7,948	23,181	19	23
St. George	774	65	839	2,668	..	1,399	251	18	27
St. Vincent's	53	35	71	235	..	166	145	14	21
Sydney	977	159	1,001	2,765	..	1,259	768	41	118
Tamworth	113	20	120	849	490	548	170	4	16
Wagga	80	13	93	1,490	..	639	92	8	4
Wollongong	682	43	825	2,254	952	1,356	345	22	18
Total	35,266	3,892	31,579	184,119	61,548	60,476	65,489	716	2,732

* Figures not available.

F. Division of Occupational Health

ANNUAL REPORT 1959

Functions and Responsibilities of the Division

The Division was formed in 1923, and since then has played an important part in the prevention of diseases and ill health arising as a result of adverse occupational factors. The following are our main activities:—

(1) To provide a free diagnostic service for occupational diseases.

(2) By visiting factories, and where necessary by carrying out scientific tests to determine whether or not the way in which specific jobs are performed, and toxic substances handled, are safe from the health point of view. Such visits may form part of specific surveys, initiated by us or be undertaken as a result of a request for help and guidance from either representative of management or union.

(3) To determine the extent and nature of atmospheric pollution. When specific complaints of problems are made to us we try and effect an improvement—in most cases by the voluntary co-operation of Management.

(4) To carry out such investigations as are necessary in connection with the New South Wales Radioactive Substances Act and Regulations.

(5) To act as technical advisors on matters of occupational health to other Government Departments and Committees.

(6) To encourage the safe use of modern day insecticides.

(7) To advise on matters relating to industrial nursing and first aid.

(8) To undertake such Health Education activities as are necessary to promote Health in industry.

Staff Details

Director: Alan Bell, M.B., B.S., D.I.H.

Medical Officers 2, Industrial Nurse 1, Scientific Officers 7, Laboratory Assistants 2, Photographic Assistant 1, Laboratory Attendant 1, Clerical Staff 5.

With Ministerial approval, the title of the Division was changed from " Division of Industrial Hygiene " to " Division of Occupational Health ". Our activities have been known by the former name since 1923; nevertheless, I recommended this change partly because our activities are now very much wider than is indicated by the word " industrial ", and partly because I felt that, from the point of view of the public, the word " health " described our activities clearer than " hygiene ".

During the year the staff of the Division has increased by eight—namely two scientific officers, a nurse, a photographic and laboratory assistant, and three clerical officers.

This increase has enabled us to expand some of our well known activities and to undertake new ones. For example, subsequent to the gazetting of the Radioactive Substances Regulations in March, 1959, it was decided to establish a Radiation Branch within the Division for the purpose of carrying out investigational work associated with these Regulations. Two other important new aspects of our work are our activities in connection with Ergonomics, perhaps more popularly known as Human Factor Engineering, and industrial nursing. Both of these subjects are discussed more fully later on in this report.

In view of the tremendous importance of agriculture to this State, I feel that the Division should devote much more time, than has been possible up to date, to health problems associated with our primary industry. This would only be possible if a new appointment were made; the full-time duties of this officer would be to investigate cases of poisoning arising from the use of insecticides, and to carry out scientific investigations for the purpose of assessing the safety of various spray methods. Apart from the foregoing there are many aspects of farm safety we should concern ourselves with; for example, carbon monoxide poisoning and occupational deafness in tractor drivers or the toxic nature of silage fumes—to mention but a few.

During the period under review Mr. H. M. Whaite, B.E., was nominated " Officer-in-Charge " of the Radiation Branch of the Division and Mr. J. L. Sullivan, M.Sc. F.S.T.C., promoted to the position of Senior Scientific Officer.

From Table I it will be seen that 1,240 patients were medically examined as against 2,536 in the previous year. Advantage was taken of the consequential " freeing " of medical manpower to visit a greater number of factories especially in connection with the causes and prevention of occupational dermatitis.

Table I

Type of Activity	1957	1958	1959
Number of patients examined	2,080	2,536	1,240
Blood slides examined for evidence of Lead Poisoning			
(*a*) Slides sent out by medical officers of factories where a lead process is carried out	4,624	4,436	4,944
(*b*) Slides of men examined at Division	970	953	543
Total	5,594	5,389	5,487
Inspections—			
Number of factories visited	508	786	1,205
Number of Atmospheric Pollution visits	199	166	501
Number of Theatres and Halls inspected	5	9	14

The commonest problems investigated were:—

Table II

Subject	Number of Visits
Noise	60
Lead	66
Occupational Dermatitis	87
Industrial Nursing	99
Dust	114
Radiation	180
Atmospheric Pollution	501

Apart from giving 43 lectures to interest groups on matters of occupational health and safety, the Division has, as in previous years, published a number of papers. The more important of these are:—

(1) Occupational Health Clinics: " The need for Group Industrial Medical Clinics " by Dr. A. Bell.
Medical Journal of Australia, April 4, 1959.

(2) " The work of the N.S.W. Division of Occupational Health with Special Reference to Radiation, Noise and Industrial Medical Services." by Dr. A. Bell.
Secondary Industries Digest, 1959.

(3) " Agricultural Pesticides—Synopsis of Toxicology and Treatment " booklet by Dr. D. C. Trainor.

(4) " Health and Industrial Safety " by Dr. D. C. Trainor.
April 1959, issue of " Safety ".

(5) " Lead Poisoning and Milk " by Dr. D. C. Trainor.
July 1959, issue of " Safety ".

(6) " The Use of Epoxy Resins and the danger of Dermatitis " leaflet by Dr. E. O. Longley.

(7) " A description of Air pollution Measurements Methods in N.S.W. and the significance of the results " leaflet by Mr. J. L. Sullivan, M.Sc. F.S.T.C.

(8) " Ergonomics—The Study of Human Factors Engineering " by C. Peres, M.Sc. A.M.I.E.

Regulations of Interest to Industrial Hygienists

(A) NEW REGULATIONS

1. Radiation

The Radioactive Substances Regulations were gazetted in March, 1959; these were based upon " model legislation " drawn up by the Industrial Hygiene Committee of the National Health and Medical Research Council of Australia. Individual sections of the Regulations deal with such matters as the issue of licenses, the use of film badges or other personnel monitoring devices, the storage, transport and labelling of radioactive substances, radioactive contamination, conditions of employment and the duties of the radiation safety officer.

These regulations are administered by the Department of Health; the functions of the Radiological Advisory Council, set up under the Radioactive Substances Act, is to advise the Minister on matters relating to the administration of the Act and to make recommendations for preventing or minimising the dangers arising from radioactive substances and irradiating apparatus.

2. Regulations to Secure the Safety and Health of Persons Employed in Factories in which Luminous Radioactive Substances are used

In the 1956 Annual Report of the Chief Inspector of Factories in Great Britian, attention was drawn to the frequent occurrence of radioactive dust particles in the air of luminising establishments. Their presence had been detected by close examination of X-ray film badges exposed for periods of up to four weeks at relevant locations in the luminising rooms, such as ledges and on the exhausted canopies; contamination causes the badges to be " spotted ".

Three Sydney luminising factories were visited and subsequent examination of the processed dental films revealed the escape of radioactive dust particles into the breathing zone of a luminiser in one factory. The source of this contamination was subsequently traced to the process of scraping the old paint from dials during reconditioning. It had been the luminiser's practice to do this work on the bench outside the exhausted canopy. Later film badge checks made at the factory when dial stripping was done inside a ventilated canopy were free from spotting.

Subsequent to this investigation, section three of the regulations (administered by the N.S.W. Department of Labour) were amended to include " the removal of any luminous radioactive substance from any surface or object."; this work is now required to be carried out under an efficient local exhaust system.

3. ABRASIVE BLASTING

Regulations to secure the safety and health of persons employed in factories in which abrasive blasting processes are used, were gazetted in May. These regulations are administered by the N.S.W. Department of Labour; their main purpose is to restrict the use of abrasives containing free silica—thereby reducing the future incidence of silicosis.

4. MAXIMUM ALLOWABLE CONCENTRATION

A schedule of recommended Maximum Allowable Concentrations of atmospheric contaminants for industrial exposures, as approved by the Industrial Hygiene Committee of the National Health and Medical Research Council of Australia, February, 1958, was published in the Industrial Gazette, March, 1959.

(B) POSSIBLE FUTURE REGULATIONS

1. ELECTROPLATING REGULATIONS

In my last annual Report I gave details of a survey of 21 factories where electroplating is carried on; these investigations frequently revealed unsatisfactory working conditions. During the year discussions have taken place with the Department of Labour as to the need for " Electroplating Regulations "; draft Regulations have already been produced.

2. SKIN DIVING

More and more people are using self-contained underwater breathing apparatus—some for pleasure and others in the course of their work. If this trend continued, as it probably will, then in my opinion consideration should be given to the desirability of controlling such occupational activities by regulations—the latter to lay down not only standards for medical fitness but also certain safety precautions to be adopted.

Surveys and Occupational Diseases of Interest

In 1959 members of the Division carried out some 1,200 visits to factories. Whereas many of these concerned old and well known health visits, we are constantly seeing interesting, and often new, hazards during these visits. This wide variety does much to maintain a high standard of enthusiasm.

In this report it is only possible to give but brief details of some of the investigations carried out, further details will be gladly supplied upon request.

1. METALS

LEAD

In spite of the antiquity of this metal, and its well-known toxicity, it is still the world's most important and commonest single industrial hazard.

From Table III the reader will see that during the year " stipple cell counts " have been carried out for the first time in many " new " factories. The total incidence of counts in excess of 3000 per million red blood cells has risen from 2·1 per cent. in 1957, to 5·3 in 1958 and 9 per cent. for the year under review. The reduced number of slides examined in battery works is mainly as a result of the death of an industrial medical officer who was employed by the majority of these firms.

Table III

Industry	Number of slides Submitted			Number of Slides with Stipple Cells Counts of—					
				3000—5000			5000 or more		
	1957	1958	1959	1957	1958	1959	1957	1958	1959
Battery Works	3,506	3,649	1,988	69	83	99	19	41	38
Manufacture of Lead Compounds ..	457	550	476	6	18	57	7	12	6
Miscellaneous—Other Users of Lead	661	277	2,480	5	10	286	2	4	81
Total	4,624	4,476	4,944	80	111	442	28	57	125

The above table shows results of " stipple cell counts " submitted by Doctors undertaking medical examination of men working at lead processes.

As in other years cases of lead poisoning have been seen in a wide range of industries and include the manufacture of solder (3·83), spraying of a lead paint (1·55), milling and mixing of pigments used for screen printing of glassware (1·47), grouping of battery plates in the manufacture of dry charge batteries (0·47), separating and assembling plates into battery boxes (2·03), dross deskimming (11·9), charging a furnace with pig lead (0·32), during the grinding of motor car bodies (0·36), while casting waggon and engine brasses (2·94), during the spraying of a lead frit (2·0), loading trucks with dross (1·12), inside an " air conditioned " crane (0·52 to 3·50) and during the cleaning of a convertor with a pneumatic hammer (4·6). The figures in brackets are the breathing zone lead-in-air concentrations—expressed in milligrams per cubic metre.

Exposure to Lead Stearate in the Manufacture of P.V.C. Sheeting

One man was admitted to hospital with a stipple cell count of 30,000 per million red blood cells and because of colic had his appendix, a normal one, removed. His lead-in-urine was 3·0 milligrams per litre prior to the administration of E.D.T.A. High counts, up to 10,000 were obtained in 9 out of 10 other employees working in the same factory where lead stearate of fine particle size (2-3 microns) was used to the extent of 1·5 per cent. in the final product. Exposure arose during the weighing and sieving of the powder; approximately 10-12 lb. of lead stearate are used per day and very little visual dust could be seen. During weighing and sieving, concentrations up to 8·3 mgs. per c.m. were obtained.

A second lead poisoning was seen in another factory where even smaller quantities of the same compound were used; on visual observation conditions were extremely clean. During the very frequent weighing and adding to the mixer, concentrations up to 5 milligrams were detected.

Flame Cleaning of Bridges

Tests to determine the degree of lead exposure were taken during a demonstration of a new oxy acetylene flame cleaning process on a bridge which had previously been painted on a number of occasions with a red lead undercoat.

The process utilised a perforated horizontal " head " through which the flame burnt. The " head " was pushed over the steelwork, held off by two slightly raised runners, so that both the flame and the unburned gas cone in the flame impinged on the surface for oxidation purposes. Two passes of the flame head were generally sufficient to clean paintwork off back to the steel. A small amount of wire brushing was then done to remove the remaining charred portions of paint.

Work was done entirely on the underside of the bridge and included burning off on the underneath and sides of H shaped girders, in addition to the flat portions of the carriageway.

Table IV

Operation	Lead Concentration Millgms. per cubic metre.
Flame cleaning underside H steel support	3·96
Flame cleaning both sides steel support	8·00
Flame cleaning Rivet heads round flame	5·63

Mercury in the Felt Hat Industry

This survey arose from a request to investigate certain cases of dermatitis occurring in those engaged in the manufacture of felt hats in a large Sydney factory.

As it was necessary to estimate the amount of mercury-in-air at various stages of manufacture it seemed a good opportunity to medically examine the employees not only for dermatitis but for any other effects of mercury.

Many of the mercury-in-air readings were extremely high; a few of them are listed hereunder and compared with the findings of American investigators. (Public Health Bulletin No. 263—Mercurialism and its control in the felt hat industry.)

Table V

Operation	Our Findings mg./M3.	American Findings mg/M3.
Fur storage	10·2	0·4
Mixing	2·1	0·5
Blowing	1·47 1·96 2·38 1·29	0·5
Weighing and feeding	0·28	0·13
Coning	0·6	0·27
A Machine	0·21	0·08
B Machine	0·115	0·08
Dyeing	1·0	0·49
Blocking	0·117	0·1

One frank case of mercury absorption was discovered. He was a man of 35 and had been in the trade for 21 years. He was excitable and had been under his doctor's care for " nerves ". He had a marked tremor of the hands and his writing was spidery and illegible. He had the corneal pigmentation which occurs in mercurial absorption, and his mercury-in-urine concentration was 2·12 mg./litre.

This man worked in the blowing room where concentrations were high; he also went frequently to the store room where the mercury concentration was found to be 10/mg./m³.

In the 1941 American survey of 529 employees examined, 59 of these were considered to be suffering from mercurialism and a further 49 thought to be borderline cases. In our survey 115 were examined and only one undoubted case of mercurialism was encountered. This is remarkable because our mercury in air readings were considerably higher than those found in America; as the standards of assessment in the two surveys were apparently the same this difference is difficult to explain. In the Sydney factory 18 men had had dermatitis at some time or other, presumably of mercurial origin.

Following the American survey a non-mercurial carroting agent was introduced into the industry. In the factory which we investigated this was not considered feasable and better exhaust and ventilation systems were installed with subsequent environmental improvements.

VANADIUM CONCENTRATIONS IN OIL FIRED LOCOMOTIVE BOILERS

At the request of the N.S.W. Department of Railways, breathing zone concentrations of vanadium were determined during various phases of routine maintenance work. The following table summarises the results obtained.

Table VI

Type of Operation—	Average Vanadium Concentration mg/m³	Appropriate Standard mg/m³
Cutting, loosening belts, etc., by oxy-torch	0·023	0·056
Electric welding	0·020	0·056
Expanding tubes by hand	0·004	0·280
Pneumatic rebeading of tubes and stays	0·024	0·280
Drilling out stays	0·049	0·280
Blowing out tubes	0·016	0·280
Removing arch	0·018	0·280

MANGANESE AND IRON

We are frequently asked to determine the extent of exposures to the above two metals during welding with different types of rods. Our tests were carried out in a ventilated welding booth; concentrations inside the welder's helmet were determined using a Soxhlet Thimble. All the following results are expressed in milligrammes per cubic metre of air.

Table VII

Type of Electrode	Sampling Conditions	20 per cent. Welding Time			50 per cent. Welding Time		
		Total Fume	Manganese	Iron	Total Fume	Manganese	Iron
Jetweld 1 ($\frac{3}{16}$ in.) ..	Booth ventilation on ..	2·9	0·043	0·85	7·3	0·097	Not done
Jetweld 47 ($\frac{3}{16}$ in.) ..	Booth ventilaticn on ..	5·4	0·052	1·61	9·4	Nil found	Not done
Jetweld 47 ($\frac{3}{16}$ in.) ..	Booth ventilation on ..	5·65	0·011	Not done	..	..	..
Jetweld 47 ($\frac{3}{16}$ in.) ..	Factory test	2·97	0·052	Not done	..	..	..
Jetweld 47 ($\frac{3}{16}$ in.) ..	Booth ventilation on (sim. confined space).	..	0·187	Not done	..	..	..
Jetweld 47 ($\frac{3}{16}$ in.) ..	Direct in fume ..	..	..	..	262·5	3.53	81·5
Murex Ironex-6g ..	Booth ventilation on ..	9·0	Nil found	1·58	8·1	0·024	Not done
EMF Ferrocraft-8g ..	Booth ventilation on ..	..	0·034	0·25	..	0·029	Not done
EMF Arcraft ..	Booth ventilation on ..	5·32	Nil found	0·32	13·5	0·01	Not done
Mangan Weld ..	Booth ventilation on ..	1·6	0·003	0·36	5·9	0·077	Not done
Mangan Weld ..	Factory test	1·09	0·22	Not done	..	..	..
Mangan Weld ..	Direct in fume ..	..	..	..	58·6	4·33	12·3
Blank Soxhlet 1 ..	....	..	Nil found	0·03	..	..	..
Blank Soxhlet 2 ..	....	..	Nil found	0·03	..	..	..

The standard concentrations adopted for manganese and iron exposures in N.S.W. are two and fifteen milligrammes per cubic metre respectively (Industrial Hygiene Committee, National Health and Medical Research Council, 1958).

Metal Fume Fever

An employee developed metal fume fever as a result of welding steel plates which has previously been coated with " Zincolate 100 ". The suppliers of this material claimed that the silica flux formed zinc silicate and, as a result, very little zinc metal fume was given off. A half hour air sample detected at the breathing zone of the welder, concentration of 10·3 mgm. per c.m. of air, thereby disproving their claim.

2. SOLVENTS

Aplastic Anaemia in the Handbag Industry

The first patient, a lady, complained of spontaneous bruising and tiredness of one month's duration. Her blood picture was 2 million reds, 2000 white cells and 44,000 platelets, the bleeding time was 45 minutes. The diagnosis of aplastic anaemia was confirmed by marrow puncture.

This person had worked 3 years in two small factories manufacturing handbags. One of the glues used intermittently contained 60 per cent. Benzol. A large number of handbag pieces have the solution applied to them by hand brush, allowed to dry until tacky and then stuck down manually. During this work the solutions are usually covered by lids to prevent evaporation. Breathing zone Benzol concentrations varied between 12 to 35 p.p.m.

Soon after seeing this patient a second lady was seen with an almost identical blood picture. Her bruising has been present for 2 years. She was carrying out almost identical work but as far as we could ascertain had only used glues containing toluol in the order of 8 per cent. Breathing zone concentrations averaged 100 p.p.m. It was, of course, impossible to say that this person had never been exposed to Benzol.

Suspected Liver Damage from Benzol

A female shoe reconditioning factory owner, E.F., who weighed 7½ stones and suffered from rheumatoid arthritis, developed hepatitis. Soon after complete recovery, as proved by liver function tests, her Mother died requiring her to be again away from work several weeks. When E.F. resumed work at the factory her liver function tests were normal but within 3 weeks deteriorated. A full blood count revealed no abnormality.

At this factory Benzol was used as a lacquer remover prior to the recolouring of the shoes. The stripper was manually applied with steel wool. Gloves were not worn. Most of the work was done in the open air but when performed indoors, breathing zone concentrations of Benzol were 350 p.p.m.

Liver damage for Benzol has previously been reported and it is suggested that this is probably the aetiology in this case.

Toluol

In my previous report I gave details of unsatisfactory working conditions in relationship to the use of toluol in gravure printing. We have recently had cause to investigate another factory where 18 out of 20 employees medically examined complained of intermittent narcosis. The highest toluol in air figures, 375 p.p.m. were obtained while washing the impression rollers and at working positions between machines. From our experience it appears that insufficient use is made of portable blowers and flexible hoses to blow the vapour away from operators working at the rolls.

Carbon Bisulphide

Exposure to carbon bisulphide up to 20 p.p.m. occurred at various phases of the manufacture of Viscose Rayon. None of the 19 people examined showed any evidence of poisoning. This is interesting in view of the fact that the maximum allowable concentration for this substance, as stipulated by the Industrial Hygiene Committee of the National Health and Medical Research Council of Australia, in 1958, is 10 p.p.m.

Exposure to Trichlorethylene in Soil Fumigation for the Growth of Mushrooms

Trichlorethylene is poured from a container into a watering can and then sprinkeled onto the bed of soil after which two other employees roll out sheets of plastic and immediately cover the area. The Trichlorethylene is applied about 1 foot in advance of the leading edge of the plastic sheet. Whilst unrolling the sheet the two employees are bent over the beds; on the other hand pouring is done from an upright position. The operation takes about 15 minutes to complete.

Table VIII

Name—	Exposure to Trichlorethylene (Parts per Million)	Trichloracetic acid in Urine Milligrammes per Litre
Mr. A.	46	35 (8 p.m.)
Mr. B.	205	27 (10 p.m.)
Mr. C.		15 (10.30 p.m.)

3. INSECTICIDES

The usage of modern day weedicides, fungicides and pesticides is rapidly increasing. The following information was extracted from the N.S.W. Department of Agriculture's 1958 issue of its booklet " List of Pest Destroyers ".

Table IX

	Number of N.S.W. Wholesale Dealers or Manufacturers	Total Number of Registered N.S.W. Products	Number of Registered Pest Destroyers Containing—	
			Chlorinated Hydrocarbons	Parathion
1958	166	1,388	296	22
1956	145	1,051	250	17
1954	131	919	Not Known	2

Whenever possible we investigate known cases of poisoning but time and the pressure of other commitments prevent but limited manhours being devoted to this important facet of public health work. Each year we hear of a number of cases of poisoning, either from the practitioner concerned or because, in the case of organic phosphorus compounds, we are asked to carry out blood chlorinesterase estimations. I feel certain that if such poisonings were made notifiable and we had an officer who could devote his full time energies to public health problems associated with the land, the Division would be able to exert a much bigger and more effective impact on this aspect of safety than is possible at the moment.

During the year Dr. Trainor, Senior Medical Officer, published a booklet called " Agricultural Pesticides, a synopsis of toxicology and treatment ". Almost 4,000 copies of this booklet, together with the N.S.W. Department of Agriculture's 1958 list of Pest Destroyers, were distributed to N.S.W. Dcctors and other interested personnel. By the combined use of these two booklets the reader is able to ascertain the active ingredient of any pest destroyer registered in N.S.W., its symptomatology and treatment.

Aldrin Poisoning

The victim, aged 20 years, had had a fractured skull some 7 years previous to this illness. Four years after this accident as he still complained of headaches, an electroencephalogram was carried out; this revealed no abnormality. The person's health had been perfectly normal until one night when he developed a typical epileptiform attack. For the two days prior to this he had had considerable exposure to Aldrin dust while re-packing large numbers of broken bags containing this insecticide. He was seen immediately afterwards by his practitioner who detected no abnormality except bilateral extensor plantar responses. An electroencephalogram showed changes consistent with those obtained from many toxic substances this reverted to normal within 2 months. *Bann at al* (J Agric. Food Chem. 4, 937, 1956), showed that animals experimentally fed Aldrin convert this insecticide to the epoxide, Dieldrin, and that it is this compound which is stored in the fatty tissue of the animal. Using a diphenylamine—zinc chloride colorimetric method the Technical Development Laboratories of the U.S. Public Health Service detected 40 p.p.m. of Dieldrin in a fat biopsy sample taken from this man. The Phenyl-azide method showed no significant amounts of Aldrin present.

Chlordane Poisoning

A householder was admitted to hospital in a delirious condition, and with central nervous system symptoms, subsequent to using a solution containing 0·5 per cent of chlordane in a continuous hand spray apparatus for 10 weeks at an average of 1 pint per day. Details of this illness have been fully recorded in the Medical Journal of Australia " Chlordane Poisoning following prolonged use for ant control at a private home " by G. Selby and A. T. Jones (March 12, 1960).

Phostoxin Tablets

My 1957 annual Report drew attention to the use of these tablets, consisting of a mixutre of aluminium phosphide and ammonium carbonate, for fumigating grain. The action of moisture liberates phosphine gas. During the year further investigations were carried out to assess the hazard to the silo operators. When these latter tests were carried out the grain had been in storage for almost a year. The following concentrations were found:—

Table X

Location—	Phosphine concentration p.p.m.
At turnover at point of discharge	15·6 p.p.m.
At breathing zone of man attending portable screen conveyor.	15 p.p.m.
Under rail loading building, above truck opening while trucks being loaded.	25 p.p.m.
In longitudinal tunnel about 30 yards away from loading railway trucks.	15 p.p.m.
In basement under elevator	20 p.p.m.

It is rather surprising to find such high concentrations after such a long storage period.

METHYL BROMIDE

A small survey of the use of Methyl Bromide in eight nurseries as a soil fumigant was carried out. Nobody had been adversly affected.

4. DUST

Eight officers, four employed by the Joint Coal Board, two by the Metropolitan Water Sewerage and Drainage Board and two by private industry were trained, by the Division, in dust counting techniques. As in previous years the Division has carried out numerous investigations, in a wide range of industries, to determine whether or not " dust " was present in potentially harmful concentrations. Some of the siliceous hazards investigated include the manufacture of soap, the ventilation of tunnels and underground construction projects, crushing plants at quarries, cleaning of industrial boilers, wet sandblasting, the repairing of Railway tunnels, the manufacture of ceramics, the use of siliceous polishing compounds by buff operators in a motor car assembly plant and the reduction in dust concentration subsequent to the use of detergents prior to brick cutting.

EXPOSURE TO DUST FROM SPRAYING SILICA CONTAINING GLAZE

At a factory manufacturing asbestos products a 40 per cent. suspension in water of a glaze, containing twenty-two per cent. of free silica in the form of ground sand, was sprayed onto the finished articles.

Two types of spray guns were used; one which sprays out the sides of the nozzle to coat the inside of depressions and holes in the ceramic, and the other, a conventional spray gun, used for coating flat surfaces.

Results of dust tests carried out in breathing zones of the two operators using the two types of guns were:—

Average dust concentration—internal spray = 3,100 particles per centimetre.

Average dust concentration—conventional spray = 870 particles per centimetre.

The free silica content of the glaze was about 25 per cent. determined by X-ray diffraction analysis.

The process has now been redesigned to eliminate this hazard.

SILICOSIS IN ENGINE DRIVERS

A survey, on employees thought not recently exposed to dust or fume, carried out in England, (Cochrane *et al*—" Tubercle "—Vol. 39, P.399 (1958)) by the Pneumoconiosis Research Unit on random samples of men aged 55-64, revealed several cases of non-incapacitating pneumoconiosis. These were all, with one exception, men who had spent considerable time on the footplate of locomotives as drivers or firemen.

No such cases have been seen in N.S.W. until this year; the occupational history of the person in question is: 1918-24 acting Engine fireman; 1924-39 Engine fireman; 1939-43 Engine driver.

As far as could be ascertained he had had no other dust exposure. When first seen in January 1959 his chest X-ray showed a fine bilateral linear fibrosis with very early nodulation. Later in the year he was classified as 50 per cent. silicosis by the Workmen's Compensation Silicosis Committee.

In order to assess present-day dust exposure of fireman-engine drivers a series of dust tests were carried out on the footplate of two locomotives during normal runs to Gosford and return to Sydney. These tests covered running through tunnels, running downhill, and heavy climbing on the return when quite a bit of sand was used to aid gripping of the wheels. Although the coal in the tender was wet at the start of the trip, it tends to dry out; when too dry it is wetted down again by the fireman. Despite the fact that the draught from the fire in the firebox tends to pull any dust created in firing into it on occasions there was some visual evidence of dust in the cabs.

Results of these tests are as follows:—

Table XI

Operation—	Average Dust Concentration Particles/Cubic Centimetre
Bunkering 38 Class Loco (Northern Coal).	80
Bunkering Smaller Type (Southern Coal).	35
Ashing 38 Class (In cab)	165
Ashing Smaller Type (In ash pit)	15
Cleaning out Smoke Box 19 Class	85
Cleaning down Brick Arches inside Firebox 36 Class in Running Shed.	1,460
Normal work Loco Foot Plate—Travelling	20

The free silica content of the dust to which employees were exposed was about fifteen per cent. maximum when cleaning out brick arches in the fireboxes, but in general was ten per cent. or less.

SPRAYING OF ASBESTOS

The above process is becoming increasingly popular and is carried out either for the fire or sound proofing of buildings. Because of union fears of excessive dust exposures, we have carried out dust tests in situations where asbestos was being sprayed in the open air into the undersides of R.S.J. steelwork during the construction of a multi-storied building (tests 1 and 2); while spraying the underside of steel decking in the ceiling of a school assembly hall (tests 3 and 4) and in the confined spaces of a basement (tests 5 and 6). The following table shows the results obtained.

Table XII

Sample Number	Dust Concentration			
	Midget Impinger		Thermal Precipitator	
	Millions Particles per cubic foot		Millions Particles per cubic foot	
	Total Dust	Fibres	Total Dust	Fibres
1	3·3	1·5	10·5	1·05
2	1·3	0·6		
3	1·6	0·44	6·9	0·61
4	1·4	0·5	4·35	0·58
5	67·7	118·6	19·6	73·4
6	14·5	26·5	3·7	14·9

No fibres between 50 and 200 microns in length were detected.

FIBROSIS OF THE LUNGS IN BIOGRAPH BOX OPERATORS

A patient, attending the Workers' Compensation Silicosis Committee, was diagnosed as having " a fibrosis of the lungs similar to a silicosis " considered due to his occupation. This man had worked as a biograph box operator for many years at a country cinema. We investigated his working conditions and at the same time the boxes at three other near country theatres were also inspected and samples of arc fume collected for analysis.

In 1946, two brothers, who had been biograph box operators at a suburban theatre, were each found to have a lung fibrosis. Analysis of deposited fume from the arc electrodes were carried out. Similarly several years previously analyses of such fume were also carried out in the United States.

Table XIII

Substance	A. United States		B. Sydney
	Flue Condensate	Box Condensate	Flue Condensate
	per cent.	per cent.	per cent.
Silicon Dioxide (Total)	1·79	1·21	6·0
Rare Earth Oxides (Mainly of Cerium)	65·70	71·80	48·0
Ferric Oxide	2·26	1·46	17·0 Combined Ferric and Aluminium Oxides
Calcium Oxide	0·53	0·20	6·7
Potassium Oxide	2·26	2·38	..
Sulphur Trioxide	2·35	2·98	Present
Phosphorous Pentoxide	0·17	0·15	Present
Fluoride	10·65	11·31	Present
Boric Anhydride	0·50	0·60	....
Copper	Trace	Trace	Trace

In the Sydney samples one contained no silica at all, the other 26 per cent. total silica of which not more than 0·5 per cent. was free silica.

Dust concentration, or more correctly, fume concentrations in the badly ventilated box in which the brothers worked was about 6,000 particles per cubic centimetre.

X-ray diffraction of the fumes taken in our recent survey did not reveal any free silica. The fume particles were extremely small when viewed by microscope, being about at the limit of resolution. They were difficult to count with any great degree of accuracy and it can only be said that they were in excess of 2,000 particles per cubic centimetre and probably of the order found in the earlier investigation.

CONCLUSION

From our tests it appears that the fibrosis is not due to free silica. Rare earth compounds, being present in by far the highest proportion, must be considered with some suspicion as the responsible agent.

RESPIRATORS

A number of " certificates of approval ", pursuant to the N.S.W. Scaffolding and Lifts Act, have been issued by the Department of Labour for certain types of air pressure helmets and canister type respirators. Such approvals have only been issued after close consultation between the Department of Labour and ourselves.

Unfortunately there is no central testing laboratory in Australia to which items of personal protective equipment, such as respirator or goggles, can be forwarded for routine testing, as is carried out in the United Kingdom and the United States of America. In my opion this is unfortunate in view of the importance of ensuring that items of protective equipment are of first class quality and entirely reliable.

RESISTANCE OF RESPIRATOR CARTRIDGES

During the year the resistance to breathing of a number of locally manufactured respirator filters and prefilters was determined. In some instances considerable differences were detected for the same type of cartridge when tested on several occasions. Further tests suggested that variations in atmospheric humidity, possibly causing swelling of the fibres or their plastic coating, was a major factor.

5. GASES

POSSIBLE ANOXAEMIA IN AN ACETYLENE MANUFACTURING PLANT LEADING TO FATAL GASING

A fatal accident occurred during the routine manufacture of commercial acetylene gas; the operator had been found in the early hours of the morning slumped over a carbide hopper above the generator with his head in the filler hole.

Post mortem examination revealed parchment like abrasions, pulmonary oedema and eight per cent. carboxyhaemoglobin in the victim's blood.

Part of the operator's duties was to inspect the level of calcium carbide in the feed hoppers of the generators. This required opening the hoppers, which are under pressure, and in many cases where the level was low, leaning over them to inpsect. Tests for phosphine, arsine and carbon monoxide were not undertaken as it was considered that whilst impure acetylene was thought to be the cause of death it did not initiate the accident, owing to the short exposure involved.

Concentrations of oxygen as low as eight per cent. in the atmosphere of the hopper were found; acetylene concentrations up to eighty per cent. were present in the hopper. Giving consideration to the known effects of oxygen lack, and exposure to high concentrations of acetylene it is felt that for some reason, perhaps because it was difficult to see the level inside hoppers if the calcium carbide was low, the operater placed his head in, or extremely closely over, the open hopper. In doing so he was exposed to an atmosphere deficient in oxygen and having a high concentration of acetylene. This probably caused his collapse and death subsequently occurred due to breathing this atmosphere including the impurities in the acetylene.

OZONE CONCENTRATIONS IN A CHEESE CURING ROOM

In a large cheese curing room 20 ultra violet lamps were used for the purpose of controlling the growth of penicillium notatum. Ten lamps were shielded with Vycor glass, and therefore did not give off ozone. None of the 6 employees noticed any symptoms of poisoning until the lamps were renewed when almost immediately all developed a cough and shortness of breath, in addition to sore eyes and headaches. Ozone concentrations at the breathing zones average 0·6 p.p.m.

A similar problem was encountered in a laboratory innoculating room of a large brewery.

CARBON MONOXIDE

" Summaire 300 " portable space heaters are widely used in industry, often in confined spaces, to dry a wide range of products such as hides and timber.

Because the Department of Labour inquired about the possibility of carbon monoxide poisoning occurring, two units were tested, each of which was stated to be burning distillate fuel at the rate of 1·8 gallons per hour, and blowing 2400 cubic feet of air per minute.

Of the units tested, one was stated to be in satisfactory adjustment, and the other in need of minor jet adjustments. Carbon Monoxide tests, taken with Siebe-Gorman testing equipment, indicated that the concentrations in the hot air output were as follows:—

	2-3 Minutes after starting	10-15 Minutes after starting
(*a*) Unit in good adjustment	Less than 10 p.p.m.	Less than 10 p.p.m.
(*b*) Unit in need of adjustment	10-12 p.p.m.	10-20 p.p.m.

Measurements were also made in a room approximately 18 ft. x 30 ft. x 11 ft. after the unit in good adjustment had been running for 15 minutes with all except two small windows of the room closed. During this time it is probable that much of the air in the room was circulated three or four times through the heater.

The carbon monoxide concentration was found to be approximately 20 p.p.m.

EXPOSURE TO MISCELLANEOUS CHEMICALS

Exposure to Fluorides from the Use of Exothermic Powders while Casting

" Feedex 2 " is an exothermic material, which when placed on a ladle of hot metal produces sufficient heat to keep the metal molten and enable efficient casting. The material contains a considerable proportion of fluoride, among other components, and it is exposure to such fume that is most likely to occur.

The foundry, where our tests were carried out, is fairly large, the casting section being about 100 ft. by 50 ft.. Ventilation is by open peak roof (two peaks), windows and two double loading doors. Ventilation was reasonable on this day owing to the north-east breeze.

Initially, when a pot was ready to be cast, Feedex was sprinkled on top. Pouring was also done through a sleeve in the mould containing the material. The following results were obtained:—

	Concentration of Fluoride per c.m. of Air.
Pouring through sleeve of material	Nil.
Original method of pouring, i.e. sprinkling Feeder III and pouring through sleeve.	1·0 milligram.
General atmosphere 10-15 ft. from casting area during casting and for a period thereafter. This was to assess exposure of employees working in the near vicinity but not actually casting.	0·13 milligram.

Effects of Formalin Fumes from Crease-Proof Cloth in a Frock Shop

Sore eyes, running noses and coughing were evident in a frock shop when the shop opened for business in the mornings. Employees and customers alike were affected by fumes from the formaldehyde resin used to " crease-proof " a batch of frocks. It appears that the material had been sent out of the factory before it was properly matured.

Although fumes of formalin were above the recommended maximum concentration, of 6 mg./cubic metre of air, when the shop was opened, air movement rapidly reduced the concentration in all areas of the shop to acceptable levels.

Subsequent tests carried out in the laboratory showed that concentration up to 2 mgm. per c.m. occurred while the material was being ironed.

Exposure to Diisocyanate Vapour in Solder Dipping of Polyurethane Varnish Coated Wires

Fifteen girls were engaged in soldering small electric components using the above type of wires. The parts to be soldered were immersed in the pool of liquid solder causing the polyurethane film to disintegrate thereby giving off acrid fumes. This method of soldering dispenses with a lot of preliminary trimming, cleaning and fluxing.

Six of the employees complained of difficulty in breathing or tightness of the chest and the presence of a dry unproductive cough. Abnormal physical signs were not detected.

This work was done in a large area, ventilated by windows in one end and along both sides. There was not much air movement.

The results of the tests carried out for toluene diisocyanate exposure, using the method developed at Du Pont Elastomers Division, and comparing with standards on a Hilger Spectrophotometer were:—

Solder dipping urethane coated wire = 0·03 parts per million.

Using coated wire and solder on iron = 0·02 parts per million.

The tentative standard exposure concentration suggested by the United States Conference of Governmental Industrial Hygienists 1958, was 0·1 parts toluene diisocyanates per million of air. A tentative value is given until more use, experience and reaction to exposure information is obtained.

The results obtained were well below this latter figure and should have been low enough not to cause symptoms.

It was suggested, that as there is some breakdown of the polyurethane coating, that small blower fans be used to remove the fumes from the breathing zone.

6. OCCUPATIONAL DERMATITIS

During the year 150 cases of occupational dermatitis have been reported to the Division; 48 of these have been investigated. The commonest causative agents were oils and solvents; the industry most affected was engineering. It is frequently possible to offer advice in order to reduce the incidence of or eliminate further cases. Sometimes work methods can be reorganised to break the contact exposure; in other cases there is need for better use of protective clothing. However, it is unfortunately true that in about 50 per cent. of cases the worker himself, either by carelessness or neglect of the appropriate safety precautions, is mainly responsible for his skin lesion.

Epoxy Resins

In view of the rapidly increasing use of the epoxy resins, in a wide range of industries, in recent months numerous factories have been visited to see the ways in which they are used. It is an unfortunate fact that, due in many instances to careless handling and lack of understanding of their toxicity, many people have developed dermatitis. For example:—

(*a*) One man used epoxy resin and hardener in rendering floors and draining channels with an acid resistant material. He used bare hands on one occasion, and rapidly developed dermatitis of face, neck hands and forearms.

Later, when using the material under strict control, he washed his hands in water previously used to rinse his gloves. He suffered a severe recurrence.

(*b*) The Manager of a brush company developed a rash on the face and eyelids after using experimentally an epoxy resin for one day. Fumes were the main cause.

(*c*) An employee manufacturing epoxy resin suffered a chemical burn with blistering following one accidental splash; he later developed a dermatitis.

(*d*) Two employees had used epoxy resin in the manufacture of golf club heads. Both developed dermatitis after a few weeks. Previously, in the same factory, an outbreak of dermatitis had occurred in the fishing rod section where three men had been affected by a different hardener.

(*e*) Two men were employed using epoxy resin to glue glass sheets to aluminium sheeting. Both developed dermatitis; one man becoming so sensitive that he could no longer enter the room where this was done. The process has been abandoned.

(*f*) One electronic firm manufacturing small condensers use epoxy resin to make small mouldings. The four employees seen, all had dermatitis.

All of these factories were small ones and, as a result, the numbers of people occupationally exposed was not large; nevertheless the overall incidence of skin trouble was approximately 80 per cent. It must not be assumed that dermatitis has been confined to small factories. For example in one large electrical factory almost 200 cases have occurred in two years.

Because of the importance of this problem a cyclostyled six paged leaflet titled " The Use of Epoxy Resins and the Danger of Dermatitis " was produced and widely distributed.

Barrier Creams

The 1958 Regulations to secure the safety and health of persons employed in factories in which welding, riveting or cutting processes are used required " .... a sufficient supply of barrier cream of a type approved by the Chief Inspector of Factories ..... ". The Division has recommended that three types, all specially formulated to protect against ultra violet radiation, be " approved ".

7. NOISE

The amount of time spent on investigating problems of noise is steadily increasing. This year we have investigated 60 problems compared to 15 last year. Some of these concerned working conditions inside factories others related to alleged nuisances in residential areas from nearby industries.

It is an unfortunate fact that comparatively few managers, or workers regard excessive noise as a potential health hazard; this is a pity because industrial deafness, or impairment of hearing can have just as important social consequence as those resulting from traumatic injuries caused by the lack of adequate machine guarding.

It should be remembered that when employees are working in situations where the noise intensity is such that newcomers have difficulty in hearing a worker speaking, at his normal speech intensity, a noise hazard is probably present provided the employee is exposed to this environment for at least 3-4 years; in many cases a much longer exposure is needed. In such situations it is good policy for the factory manager to arrange for a " Noise Survey " of his factory to be carried out and obtain a complete scientific appraisal of specific job situations. Where intensities, say over 85 decibels, are detected it is frequently advisable to carry out hearing tests on the employees; by studying these latter results in relationship to the known noise intensities it is possible to accurately assess the enivronment.

I should also like to remark that many managers, when we talk to them about noise suppressions, automatically assume that to do anything effective is a very expensive matter. This is not necessarily so; it is frequently possible to reduce noise intensities to acceptable levels by simple inexpensive means.

In this report I do not propose to discuss any of our investigations except to briefly refer to a method of reducing the amount of noise created in the common industrial operation of diamond drilling.

Readings were taken inside a concrete operating gallery, in the base of a large dam, with a H. H. Scott Sound Level Meter. The readings indicate that the use of a lead lined manifold on the exhaust is very effective for reducing noise; its use resulted in a 6 decibel decrease.

8. EXCESSIVE TEMPERATURES

At one factory visited men were required to enter a tunnel in which there was a conveyor belt carrying painted motor car bodies. From time to time cars came off the conveyor and it was necessary for men to go inside and make readjustments. Men were required to work, for short periods, in a temperature of 240° F. without any protection. It was suggested that if after suitable mechanical modifications had been made to the process, men still had to enter the tunnel, no entry should be made until temperatures had dropped to 120° F.

At another factory excessive temperatures were present adjacent to a large vertical wire enamelling machine. The corrected effective temperatures, on the top gallery, ranged from 87° to 99° F.; the heat stress indices in the same locations were almost 100. The main contributing factors to this heat strain were the dry air temperature of 120° F. to 130° F. and radiant heat from the nearby aluminium roof.

9. AIR FILTER EFFICIENCY TESTS

EFFICIENCY TESTS OF "PRECIPITRON" ELECTROSTATIC AIR FILTERS INSTALLED IN AN OPERATING THEATRE

The tests were carried out using two Pneumoconiosis Research Unit hand pumps, one on the inlet and the other on the outlet side of the filter. In operation, air is drawn through a clip containing a small square of No. 1 Whatman filter paper, dust in the air sampled being trapped in the pores of the paper. The density of the papers are measured by densitometer both before and after the test, being compared to a standard paper. In this way the comparison can be made of the staining power of dust in the inlet and outlet air. This test is similar to the blackness test as suggested by the American Society of Heating and Ventilating Engineers.

Results of the tests carried out were:—

Table XIV

Filter Tested	Inlet Side Dust Concentration Particles per c.c.	Outlet Side Dust Concentration Particles per c.c.	Efficiency	Average Efficiency
			Per cent.	Per cent.
Northernmost " Preciptron "	12·4	2·4	81·0	89·8
Northernmost " Preciptron "	33·0	0·45	98·5	....
Southernmost " Precipitron "	14·0	0·0	100·0	92·5
Southernmost " Precipitron "	3·5	0·52	85·0	....

10. HEATING AND VENTILATION OF THEATRES, PUBLIC HALLS AND OFFICES

Table XV

	Ventilation	
	Satisfactory	Unsatisfactory
1. Theatres—		
Main Hall of Theatre	6	1
Biograph Box	3	4
Rewind Room	3	3
2. Public Halls	3	..
3. Offices	2	4

The above table summarises the result of tests carried out during the year.

Human Factors Research

In conformity with our policy of keeping abreast of the latest overseas research developments the Division has recently extended its activities to include the relatively new and important field of Ergonomics, or Human Factors Research, which is the scientific study of occupational situations from the human point of view.

Such research has immediate and important applications especially in regard to the design and layout of machines and processes used by people in industry; until recently little scientific consideration has been given either to the comfort and convenience of the human operator or to the limitations and healthy use of the human body.

One aspect of this work which is of particular interest to the Division is Human Kinetics which is the study of the muscles and movement of the body in various occupational situations. Numerous strains, sprains and hernias occur every week throughout local industry. Many of these might have been prevented by an adequate knowledge of the correct use of the body both in the lifting, pushing or pulling of objects and the placing of operating levers, dials and wheels on machinery in places easily accessible—thereby reducing the need for the operator to overstretch.

The Division is presently engaged in a survey of situations in industry where traumatic injuries have occurrred with a view to assessing to what extent human factors, such as anatomy, physiology and psychology, are contributing to traumatic injuries. As our experience increases we will be able to offer an advisory service to industrialists, as to the various ways in which specific jobs within their own factories may be made safer.

Some of the diseases and injuries to which we will pay specific attention are muscular sprains, herniae, slipped discs and tenosynovitis.

Advisory Service on Matters Relating to Occupational Nursing Services and Industrial First Aid.

Post-war Australia has experienced a rapid industrialisation consequently it is important that there be an adequate medical coverage—not only from the point of view of increased numbers of factory doctors, nurses and first aiders but also from the point of view of utilising their services to the maximum. advantage.

The following table shows the extent of present day " medical coverage " in N.S.W.

TABLE XVI

Factories employing between—	Number	Doctor Coverage		
		Part-time	Full-time	None
1,000-2,000 employees	38	20	3	15
2,000-3,000 employees	15	6	4	5

TABLE XVII

Factories employing between—	Total No. of Factories	Number of Factories with—	
		Trained Nurse	First Aid Attendant only
300-400	50	28	16
401-500	60	36	14
501 or more	100	65	35

In March, Sister Roach R.G.N. R.M.N., O.H.N.C. (R.C.N. Lond.) F.N.S.W. was appointed to the staff of the Division in order to build up an advisory industrial nursing and first aid service; this appointment is the first of its kind in Australia and will, I am certain, prove most popular with industry.

It is unfortunately true that few managements allow their industrial nurses to do little more than medical and welfare work. This is unfortunate as the nurses' training make them a potential valuable member of the factory safety organisation and they should therefore, be encouraged to express their views in any matter relating to health, safety and hygiene. Industrial nurses should make routine plant visits and be well acquainted with details of all manufacturing processes carried out in their factory; in this way whenever a worker comes to the surgery with dermatitis, or complaint that his health is being adversely affected by fumes or dust at work, the nurse will be in a positiion to make an intelligent critical appraisal of the situation. Such an opinion can be of incalculable help to the factory's personnel department or the patient's private Doctor.

Miss Roach is currently visiting all industrial nurses in N.S.W. to determine the extent and scope of their activities; at the end of each visit she sees senior management and discusses her observations and opinions with them. At the time of writing 47 such visits have been made and a further 21 to factories where first aid men are employed. From what I have just said it will be apparent that the Division is now prepared to offer specific and detailed advice on problems of first aid, the design of medical centres and the scope of such services and problems specifically related to the employment of women.

Two of Sister Roach's other main spheres of activities during the year have been:—

1. Organising post graduate lectures on Occupational Health Topics for nurses. We decided to hold these sessions in order that industrial nurses should have the opportunity, not only to learn something of the health hazards associated with many of the new technological advances but also to have the opportunity, by attending lectures and taking part in discussions, to meet their colleagues thereby increasing their knowledge of certain medical aspects of their work.

The first session was held in October and was opened by Mr. G. R. G. Cameron, Under Secretary of the N.S.W. Department of Public Health. There was an attendance of 98 nurses.

2. Because of the difficulties in providing an adequate medical service in small factories, where incidentally the need is often greatest, several countries overseas have developed schemes whereby 50 or 60 factories within a given small geographical area combine together to run a communal scheme.

Sometimes the necessary finanical support for these schemes comes entirely from industry itself; on other occasions the necessary funds are provided by a working partnership between industry and Government. The need for group industrial medical clinics in this State was discussed by myself in an article published in the Medical Journal of Australia (April 4, 1959. p. 449). During the year Miss Roach has surveyed a number of areas, (namely Brookvale, Rydalmere, Silverwater and St. Mary's) to see if such locations were suitable for such a scheme. Her enquiries suggest that this is the case.

Radiation

As stated earlier, the Radiation Branch has been set up within the Division in order to investigate possible radiation hazards arising from the use of irradiating apparatus or radioisotopes. Its staff consists of two scientific officers (one being the Officer-in-Charge), a clerk, a typist and a photographic assistant for film badge work.

Most of the Branch's work is directly concerned with investigating applications for licenses by the users of X-ray machines of radioisotopes; but surveys determining the exposure to radiation have also been carried out amongst users who are not required to be licenced (e.g. dentists and veterinary surgeons using X-ray equipment for diagnostic purposes only). In addition, a number of investigations have been made as a result of public or private complaints alleging a radiation hazard.

INSTRUMENTATION

Most of the instruments used by the Branch are portable ones. They include (*a*) the Ekco N571 monitor, which is generally used for the measurement of dosage rates from radioisotopes, and from continuously-operated X-ray machines used for fluoroscopy or therapy. Its main disadvantage is that the highest full-scale reading is only 150 milliroentgens per hour. Consequently an N555 monitor, which reads to ten times this value, has been ordered.

(*b*) The Electronic Instruments Ltd. Electrometer No. 37A, the greatest use for which lies in the determination of X-ray dosages acquired over short periods (up to a few seconds) where the large time constant of the Ekco N571 makes an accurate reading impossible. Such conditions occur in diagnostic plants. This instrument is not normally used for measuring gamma-ray dosage since the lead used to shield the input capacitors against X-rays is not adequate against gammas;

(*c*) The Erricsson alpha-beta-gamma monitor, type No. 145A, which has been useful in determining surface contamination in luminising establishments, as well as low gamma dosage rates in ranges below that of the Ekco monitor.

(*d*) The Phillips PW4010 monitor which serves the same purpose as the Ericsson monitor but which is more portable, though less accurate.

In addition the Branch possesses a gamma spectrometer, but to date, most laboratory determinations have been satisfied by using a G.M. tube, scaler and preset count timer.

LICENCING

In New South Wales, licences are issued to persons by the Radiological Advisory Council. These applications are usually investigated by this Branch, though in some cases (e.g., as a result of personal knowledge of members of the Council) licences may be issued without preliminary enquiry. The investigation usually takes the form of determining radiation dosages to persons in the neighbourhood, and observing safety precautions used, such as shielding and labelling. The following table shows the position at 31st December, 1959. As stated earlier, a licence attaches to a person, not to a company or institution, nor to a machine, so the term " hospitals " covers mainly the users of radio isotopes at these Institutions.

TABLE XVIII

Classification	Number of Applications for Licences From Mid-March Till 31st December, 1959	Number of Licences Issued		Investigations Proceeding	Rejected Applications
		Immediately	After Investigation		
Medical	108	77	14	11	6
Industrial	40	1	30	9	..
Research	11	3	5	3	..
Chiropractors	14	..	..	14	..
Hospitals	18	17	..	1	..
Total	191	98	49	38	6

It is hoped to institute a regular system of inspections, and ultimately to revisit each licencee at least once a year.

The following tables shows the number of visits made by the two scientific officers of the Branch, at which radiation measurements or inspections of installations were made. The classifications are different from these in the previous table. Thus, the visits to private doctors would include testing of diagnostic units, whilst only fluoroscopic and therapeutic units need be licensed.

TABLE XIX

Category	No. of Visits
Medical Practitioners	47
Hospitals	60
Research Institutes or Departments	6
Industries	35
Dentists	7
Veterinary Surgeons	12
Chiropractors	13
Total	180

The following investigations are of some interest, and might be briefly mentioned.

RADIOLOGICAL HAZARDS IN CHIROPRACTORS

Under the Regulations, it is necessary for chiropractors to be licenced, even though their X-ray plants are only used for diagnostic purposes. A survey of nine such practitioners showed that their use of irradiating apparatus was limited to diagnostic radiography of the spine. Clients are X-rayed only once, and fluoroscopy is never practiced. Equipment and techniques were generally satisfactory, but in two cases, complete spines were being radiographed in one exposure. In one of these, a light-beam diaphragm and special casette, eight inches by thirty inches, were used, and the area of a patient irradiated was limited; in the other, two fourteen-inch by seventeen-inch plates were exposed simultaneously, and the patient was virtually exposed to full-body radiation by the primary beam.

The following recommendations arose from this survey, and the issue of licences has generally been made conditional on their adoption:—

(1) That X-ray examination of the lower spine should only be carried out with X-ray equipment capable of high output (i.e. short exposure time);

(2) That the use of mobile or portable equipment be restricted to radiography of the cervical spine;

(3) That the smallest plate consistent with the area of interest be used. A plate eight inches by ten inches is recommended;

(4) That radiographs be taken only with a coning device matched to the film size and film-focal distance in use;

(5) That additional aluminium filtrations of 1·5 millimetres be used; and

(6) That lead or lead rubber sheeding should be used for gonad protection where applicable.

RADIOLOGICAL HAZARDS IN VETERINARY PRACTICE

A similar survey was carried out at twelve veterinary practices, in which 29 persons were working. In this case, no question of licencing was involved. A curious fact emerged from our enquiries, namely, that whereas almost all veterinary surgeons were somewhat fearful of leukaemia—the possibility of which is remote in their case—very few seemed to appreciate the danger of skin burns and skin carcinoma from direct exposure to the rays. Yet these are the main risks they face. The reason is easy to see, for the veterinarian is constantly dealing with a unco-operative patient. Immobilisation is necessary for a good picture, and this may be achieved in one of three ways.

Firstly the animal may be anaesthetised. This would appear the logical method, but is not popular because the owner does not like to have his animal handed back in asemi-anaesthetised condition. In spite of this objection, some surgeons use this method routinely.

Secondly, the animal may be held by the owner, but this is not favoured since the inexperienced owner may allow some movement to take place at the moment of exposure.

The result is that the third method is used. The surgeon either steadies the animal with one hand, or assists the owner to do so, and works the timer with his free hand. Often he holds the animal himself, and gets another person to operate the machine. In two cases, where surgeons habitually held the animals and too little or no precautions in shielding the hands, there were suspicious signs e.g., little hair on the backs of the hands and, in one case, thin and atropic skin.

It was found that there was a need for improvement in the techniques used in private practice, and a need for a proper appreciation of the dangers of radiation. On the basis of twenty films per week, the dosage to the unshielded skin might easily be double the maximum allowable exposure of 1·5 roentgens per week.

Specific recommendations included the use of a cone to restrict the beam to the smallest practicable area, and the use of a filter to cut out the softer X-rays which do not contribute to the photographic exposure, nor to fluoroscopy. Leaded rubber gloves and aprons should be worn by participating persons at all times, and the animal should be anaesthetised. The X-ray plant should be checked from time to time. Special care should be taken in fluoroscopy, since the operator may receive a large amount of direct radiation, as well as scatter.

TRACER STUDIES IN INDUSTRY

Two studies involving the use of radioisotopes as tracers were carried out by a firm of management consultants for a large industrial undertaking in Sydney. The first involved the release of Krypton—85 into stack gases under varying conditions of plant operation. Eight such tests were made at approximately hourly intervals, each involving the release of 100 millicurries over a period of ten minutes. Measurements were carried out using a Geiger-Muller tube feeding to a scaler. Krypton—85 has a comparatively long half-life (10·6 years), and its release into the environment could be a matter of some concern. Calculations of the concentration of the emergent gases showed a peak concentration of about 280 x 10^{-6} microcuries per c.c. average over ten minutes. The maximum ground-level concentrations downwind would have been perhaps 1/500th of this value, on intermediate between the values recommended by the International Commission on Radiological Protection for continuous occupational exposure and for continuous non-occupational exposure. In fact, the exposure was not continuous, being limited to about eight ten-minute periods, with little expectation of a recurrence at any future date.

The second study involved the release of 5,000 gallons of tar labelled with 10 millicuries of antimony-124 (as triphenyl stibene) into a tank containing over one million gallons, and studying the emergence of the labelled tar, using scintillation methods. The concentration of the radioisotope in the 5,000 gallon tank was 4·4 x 10^{-4} microcuries per c.c. and in the main storage tank about 10^{-5} microcuries per c.c., which is about half the I.C.R.P. recommended maximum drinking water standard of this isotope for the general population.

Ultimately this tar will be burnt, and possibly sone of the radioisotope may lodge in the boiler soot. Considering its initial concentration after pumping to the main storage tank, the wide distribution of this tar through industry, and the long time that would elapse before a boiler firebox is cleaned—probably a large number of half-lives—it is considered that the concentration of the radio isotope in the soot rendered air-borne during this operation would be well below the appropriate I.C.R.P. recommendation.

FILM BADGE SERVICE

This facility, which is available to all radiation workers, came into existence in November, when we took over the services previously conducted by the State Bureaus of Physical Services and by the Industrial Hygiene Unit at the School of Public Health and Tropical Medicine, with the exception that the latter organisation continued to process badges worn by radiation workers at the University of Sydney.

Only about 300 films were processed during the last two months of the year. These came from three industrial companies, eight hospitals, three dentists and one research institution. It is expected that by the end of 1960 the monthly total will exceed 500. Users wear their films for divers periods. Thus on week is recommended for industrial users, one month for hospital X-ray departments, and three months for dentists.

Our methods are essentially similar to those of the Commonwealth X-ray and Radium Laboratory, except that we issue film-badges holders, and the films. At present DF11 dental films are being used, but it is probable that a specially developed personnel-monitoring film will be substituted shortly.

In use, the exposed films are returned after the specified period, together with an unexposed film from the same batch. They are then developed, and their net densities (i.e. total densities minus control density) are compared with the net densities of a series of standards prepared by exposing four films from the same batch to known dosages of gamma radiation from Cobalt-60. Because the blackening of photographic film is very dependant on the energy (or half value layer) of the radiation, the net densities of the personnel films are divided by a factor which depends on the H.V.L., and which has been determined by the Commonwealth X-ray and Radium Laboratories.

The film-badge holders being issued contain dural and tin filters. By means of the former, it is hoped to discriminate between the various qualities (energies) of X-rays; by means of the latter, between X- and gamma-rays. To date, we have been unable to carry out the full experimental work needed for these determinations, but, experience has shown that discrimination may be impracticable at total dosages below about 50 millirem. About 80 per cent. of our film-badge returns fall in this category.

Air Pollution

GENERAL

Progress towards a new Clean Air Bill during 1959 proceeded towards final stages of drafting legislation and it can be anticipated that it will be ready for presentation to Parliament early in 1960. A committee, established by the Minister for Health, is at present engaged on producing a suitable draft. At the same time, the general work of the Division of Occupational Health in the field of air pollution has been increased rapidly and approval has been given for still further increases in staff.

One of the major advances during the year arose from the larger allocation of funds to purchase special equipment for air pollution purposes and orders for it have already been placed. The type of apparatus which is being obtained is suitable for highly refined analyses which cannot be accomplished by traditional means. An infrared spectrometer is a major item which, with its ancillary equipment, will cost approximately £10,000. It is expected that this together with vapour phase chromatographic apparatus which has also been ordered will greatly facilitate investigation of pollution by organic materials including those which are of significance to lung cancer.

MONITORING STATIONS

The results of all air pollution measurements are shown in Tables XXI, XXII, XXIII, XXIV. As in previous years, dust fall, smoke density and sulphur dioxide measurements from the general basis of the Division's survey work but an additional feature in the 1959 results is information concerning oxidant levels. These were only commenced at the latter end of 1958 and were not included in that year's report. However, as it is intended that a special report will be submitted in the near future including the six years of a survey to the end of 1959, there is no point in dealing with it at length here.

SPECIFIC PROBLEMS

Port Kembla Survey

The survey of sulphur dioxide gas and other fumes in the Port Kembla area was continued along similar lines to 1958. This was reported upon at length in the Annual Report of last year and there was no significant change in the methods of observation during 1959. However, because of the high concentrations which had been observed in 1958, it was decided that a medical survey of the inhabitants of the most affected area should be conducted and plans for this are now being implemented. Also modification of the Division's automatic sulphur dioxide recorder was made during 1959, to enable the instrument to record concentrations up to 25 parts per million instead of being restricted to the upper limit of 5 p.p.m. as previously. Although the instrument was only installed in the latter part of the 1959, readings of 7 and 8 p.p.m. have already been obtained. The results of the daily monitoring stations which are also shown in Table XXIII indicate that little change occurred in the emission rate compared to the previous year.

Smoke from Brick Works

The problem of smoke from Brick and Pottery Kilns was another major Divisional activity during 1959 and as a result of the efforts of officers of this Division in collaboration with the Joint Coal Board improved methods of firing have been developed. At all brick works where the new methods of firing have been tried, considerable reduction in smoke emission has been achieved, and it is apparent that in most cases it should be possible for companies to avoid exceeding the present legal limits of smoke emission.

The method has become widely known in the industry as " split firing " and is it hoped that it will soon gain general acceptance. As the name implies, split firing depends basically upon dividing each normal addition of fuel into two parts. Each portion is added in a specific manner, consequently, " split firing " is not simply a modification of the well known " little and often " technique.

Normally a brick kiln requires approximately 7-10 days for each complete firing. During this time it is fed with high volatile coal at intervals of 2½ to 3 hours. In most cases the smoke problem is at its severest during the fully firing stage which usually occupies the last two or three days of the cycle. Approximately one ton of fuel is added to the kiln each time and it is the practice to place it in the fire box in such a manner as to restrict the admission of secondary air to the minimum. This is done with the object of preventing too much air entering the kiln through the fire box when the bulk of the combustible material has burnt, but it also has the result in the first half, of producing ideal conditions for smoke production. With the split firing method, the total quantity of fuel in every 2½ or 3 hour cycle is the same but only two-thirds of it is placed on at the beginning. As there is a further addition of fuel to be made, it is possible to leave a large opening above the fuel bed when the first major portion is added, and consequently, enough secondary air to facilitate combustion can enter the kiln. When conditions of draft are reasonable it is possible for smoke, after the first fuel addition to be maintained at a density of less than the generally accepted standard of Ringleman Shade 2.

The initial quantity of fuel loses its volatile matter rapdily and usually the kiln can receive the remaining one-third within 10-15 minutes of the completion of the first addition. The second portion is added near the front of the fire box and this does not ignite with the same rapidity as in the normal method when it is spread evenly over the fire. Consequently, combustion is better controlled and, as in the first addition of fuel, smoke can be maintained at a satisfactory level. The fire can be adjusted by means of the second addition of fuel in such a manner that too much air does not enter the kiln, hence it doesn not cause production problems. Also, as a burner is only required to add fuel on the second part of the cycle it does not result in significantly increased effort and thus there has not been as much opposition to it compared to past efforts to have new methods introduced.

As part of the brick and pottery works survey, smoke density tests have been carried out in various locations. At one of these, in the vicinity of a stoneware pipe works smoke density measurements of twenty on more Coh units per thousand feet of air were recorded. In view of this it was decided to ascertain whether any respiratory ill health amongst the local inhabitants was possibly occurring. The method adopted was to conduct a medical questionnaire of the affected area as well in a nearby district not affected by smoke. Residents in both areas, which could be regarded as virtually identical except for air pollution, supplied the answers which are summaried in Table XX.

Table XX—Summarised Answers of Persons Interviewed in an Area of Heavy Smoke Density Compared to a Non-Affected Area.

Control	Affected Area	
332	536	Numbers of people interviewed.
per cent.	per cent.	
10·0	24·0	Numbers of people who complained of respiratory ailments either before or since living in the area.
2·7	8·1	Numbers of people entirely free from chest troubles until they moved into the areas.
6·8	25·0	Numbers of people suffering respiratory illness at time of interview.
42·7	30·6	Number of people who have had no chest trouble over last 5 years.
95·0	27·7	Chest condition worse since started to live in area.
47·0	41·0	Chest condition improved since came to areas.

Boiler Smoke

As in previous years the Division has given advice to numerous industries and other organisations including several hospitals on the control of smoke from hand-fired boilers. In all cases very substantial improvements were made when the advice of the Division was accepted, usually without substantial cost. Frequently improvements were made by simple variation in firing methods but where this was not sufficient it was always possible to substantially reduce smoke emission by the use of a simple steam air injector.

Miscellaneous Investigations

In addition to the above investigations, numerous others of various types were made during the year. Some are still incomplete and will be dealt with in detail in later reports and others have been mentioned previously. These include odours from chemical plants, zinc oxide fumes, plaster dust, chemcial emissions and many other similar problems.

One of the major investigations which it is intended to report upon at a later date is dust emission from cement works. In many cases in the vicinity of such works excessively high dust fall values have been recorded.

Associations with Outside Bodies

During the year the advice of the Division was sought by several persons outside the State and the Division continued to assist other States in air pollution investigations. At the invitation of the Victorian Clean Air Council, Mr. Sullivan of this Division attended meetings at Melbourne and addressed members on methods of air pollution investigation in this State and subsequently two officers of the Victorian Health Department spent short stays studying this Division's methods. Also, officers of the Queensland and Tasmanian Health Departments paid visits, lasting for some days, to the Division's headquarters, and received information concerning our methods of measuring air pollution. Various written enquiries, one case from as far afield as Suva, Fiji, were received by the Division.

UNIVERSITY OF NEW SOUTH WALES

Mr. J. L. Sullivan continued to serve the University of New South Wales in the capacity of honarary seniour lecturer and supervised post graduate work on air pollution. At the end of 1959, two new Research Fellows were appointed by the University and one of these has already commenced to work in the Division's laboratories. The Research Fellow, Mr. G. Cleary, intends to spend approximately two years studying the cause, nature and extent in the atmosphere, of polycyclic hydrocarbons especially those of carcinogenic significance.

Table XXI—Mean Deposit Gauge Results

Tons per Square Mile per Month

Location of Gauge	Water Insoluble Solids	Combustible Matter	Ash	Water Soluble Matter
Sydney, City 1	23·2	6·2	17·0	7·0
Sydney, City 2	21·9	5·8	16·1	7·9
Sydney, City 3	14·0	3·6	10·4	8·9
Sydney, City 4	20·6	6·0	14·6	6·2
Sydney, Potts Point	18·5	5·3	13·2	8·6
Sydney, Pyrmont	33·4	8·3	25·1	8·2
Sydney, Ultimo	17·1	4·9	12·2	7·3
Sydney, Waterloo	13·0	3·7	9·3	7·0
Sydney, Darlington	15·9	4·8	11·1	7·8
Sydney, Paddington	13·2	3·7	9·5	7·3
Sydney, Darling Point	10·6	2·9	7·7	6·8
Sydney, Roseberry	10·0	3·0	7·0	6·7
Sydney, Alexandria	85·4	20·9	64·5	7·8
Sydney, Rozelle 1	19·1	6·0	13·1	4·3
Sydney, Rozelle 2	35·3	15·3	20·0	9·1
Sydney, Rozelle 3	21·1	8·4	12·7	5·8
Sydney, Rozelle 4	11·6	4·5	7·1	4·8
Sydney, Balmain 1	14·2	4·9	9·3	6·7
Sydney, Balmain 2	14·7	5·7	9·0	4·7
Sydney, Sydenham	11·4	3·5	7·9	5·1
Sydney, Annandale	14·2	4·3	9·9	6·0
Sydney, Leichhardt	11·1	3·7	7·4	6·0
Sydney, Fivedock	8·5	3·4	5·1	5·7
Sydney, Mortlake	14·1	6·3	7·8	7·1
Sydney, Rhodes	15·8	6·7	9·1	7·5
Sydney, Concord 1	17·2	8·8	8·4	10·0
Sydney, Concord 2	8·9	3·0	5·9	5·7
Sydney, Gordon	7·1	2·4	4·7	4·5
Sydney, Hornsby	3·6	2·7	0·9	2·7
Parramatta, City	10·5	3·0	7·5	2·4
Parramatta, Epping	9·0	3·2	5·8	4·2
		Ignition Loss		
Newcastle, City 1	46·5	20·4	26·1	38·1
Newcastle, City 2	17·4	7·9	9·5	25·5
Newcastle, Mayfield 1	30·6	13·4	17·2	26·0
Newcastle, Mayfield 2	41·6	15·7	25·9	23·4
Newcastle, Mayfield 3	50·3	20·5	29·8	18·9
Newcastle, Mayfield 4	34·7	12·8	21·9	20·8
Newcastle, Tighes Hill	56·8	20·4	36·4	19·6
Newcastle, Stockton	34·2	14·1	20·1	33·1
Newcastle, Broadmeadow	13·3	6·3	7·0	13·9
Newcastle, Kotara 1	11·8	6·4	5·4	12·7
Newcastle, Kotara 2	13·4	7·7	5·7	12·2
Newcastle, Waratah	19·5	8·1	11·4	15·5
Wollongong, City	13·9	3·7	10·2	7·8
Wollongong, Port Kembla 2	27·0	6·5	20·5	10·3
Wollongong, Port Kembla 4	30·5	7·3	23·2	9·4
Wollongong, Warrawong 1	33·1	10·5	22·6	7·8
Wollongong, Warrawong 2	86·1	34·4	51·7	9·5
Wollongong, Warrawong 3	20·0	6·3	13·7	6·1
Wollongong, Lake Heights	31·9	9·4	22·5	8·3
Wollongong, Cringilla 1	56·3	22·0	34·3	8·0
Wollongong, Cringila 2	31·9	7·9	24·0	6·5
Wollongong, Primbee	17·9	5·7	12·2	8·5

Table XXII—Smoke Density Measurements in New South Wales — 1959

Location	Result	Smoke Concentration—Cohs/1,000 Linear Feet											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Sydney—City 2	Mean	0·8	0·9	1·0	1·7	2·3	2·6	2·0	1·4	1·6	1·2	0·5	0·5
	Highest Day	1·9	1·7	2·3	3·2	4·1	4·3	3·5	2·7	3·5	2·5	1·5	1·4
Sydney—City 3	Mean	0·9	1·1	1·5	1·3	2·0	2·0	1·3	1·1	1·2	1·0	0·4	0·6
	Highest Day	1·3	3·3	2·4	3·2	2·6	3·4	2·5	2·0	2·0	1·6	0·8	1·4
Sydney—Paddington	Mean	0·2	0·2	0·5	1·1	1·4	2·3	1·8	1·1	1·0	0·7	0·3	0·6
	Highest Day	0·3	0·5	1·8	2·2	2·8	3·8	3·6	3·2	2·8	2·3	0·9	1·6
Sydney—Balmain	Mean	0·7	0·6	0·7	1·0	1·3	1·2	1·2	0·9	1·0	0·8	0·5	0·8
	Highest Day	1·3	1·3	1·8	2·0	2·5	2·2	2·1	1·7	2·1	1·5	1·1	1·2
Sydney—Annandale	Mean	0·7	1·0	1·1	1·3	1·8	2·1	1·9	1·4	1·5	1·1	1·1	0·9
	Highest Day	2·3	1·5	2·5	2·6	3·3	4·2	4·4	3·2	2·9	2·7	1·6	2·0
Sydney—Redfern	Mean	0·7	0·8	1·1	2·1	2·5	3·1	2·4	1·8	1·7	1·1	0·7	0·8
	Highest Day	2·2	1·8	2·3	4·0	3·4	4·6	4·1	3·5	2·8	2·2	1·3	1·8
Sydney—North Sydney	Mean	0·9	0·8	1·0	1·1	1·3	1·7	1·2	0·9	1·3	1·1	0·8	0·6
	Highest Day	1·5	1·5	1·9	2·1	1·8	2·7	2·2	2·3	2·3	1·9	1·1	1·1
Sydney—Matraville	Mean	0·3	0·8	0·5	1·1	1·4	1·6	1·5	1·3	1·1	0·8	0·7	0·4
	Highest Day	1·5	1·6	1·7	2·6	2·9	3·2	3·4	3·1	3·1	2·8	2·9	1·3
Newcastle—City 1	Mean	0·5	1·3	0·3	1·1	0·9	2·3	1·5	2·2	1·7	1·2	0·6	1·1
	Highest Day	2·3	3·5	1·8	2·9	3·3	5·8	4·7	4·1	5·3	2·2	2·2	3·4
Newcastle—City 2	Mean	0·5	1·2	0·6	1·5	2·1	2·5	1·6	2·2	1·9	1·6	1·0	1·4
	Highest Day	2·1	2·3	2·1	4·2	4·2	4·9	4·3	4·6	4·5	5·0	2·4	3·6
Newcastle—Mayfield No. 4	Mean	1·0	1·4	1·8	2·0	1·9	2·4	2·0	1·3	2·3	2·1	1·1	1·3
	Highest Day	3·3	3·5	3·5	5·6	4·2	8·3	3·3	3·1	4·4	3·8	3·8	2.9
Wollongong — Port Kembla No. 1.	Mean	0·5	1·1	0·3	0·9	0·5	0·8	0·5	0·4	0·4	0·7	0·9	0·7
	Highest Day	1·8	3·0	1·6	3·4	2·0	3·2	2·1	1·6	2·2	1·9	2·5	2·5
Wollongong — Port Kembla No. 2.	Mean	0·3	0·6	0·3	0·6	0·4	0·5	0·2	0·3	0·2	0·4	0·4	0·2
	Highest Day	0·8	1·3	1·8	2·4	2·3	1·6	1·2	1·6	1·3	1·3	1·2	1·1
Wollongong — Port Kembla No. 3.	Mean	0·4	0·7	0·3	0·5	0·4	0·6	0·4	0·4	0·3	0·4	0·6	0·5
	Highest Day	1·4	2·1	1·6	2·1	2·4	2·1	1·8	1·8	1·8	1·8	2·4	1·9
Wollongong — Port Kembla No. 4.	Mean	0·7	1·2	0·5	1·0	0·6	0·9	0·6	0·5	0·7	0·8	1·0	0·7
	Highest Day	2·1	2·2	1·7	2·7	2·0	3·8	1·9	2·9	2·6	2·5	2·1	2·4
Wollongong — Port Kembla No. 5.	Mean	0·3	0·7	0·4	0·7	0·5	0·8	0·3	0·3	0·7	0·8	1·2	0·8
	Highest Day	0·8	1·3	1·2	2·5	1·7	2·8	1·3	1·9	1·9	2·5	2·8	2·6
Wollongong — Port Kembla No. 6.	Mean	0·4	0·5	0·3	0·3	0·3	0·2	0·1	..	..	0·4	0·5	0·4
	Highest Day	1·0	1·1	1·0	1·2	1·3	0·7	0·4	..	..	0·8	1·5	1·5
Wollongong — Port Kembla No. 7.	Mean	..	..	..	..	..	..	..	..	..	0·2	0·4	0·2
	Highest Day	..	..	..	..	..	..	..	..	..	0·8	1·1	0·7
Wollongong — Port Kembla No. 8.	Mean	..	..	..	..	..	..	..	..	..	..	0·2	0·1
	Highest Day	..	..	..	..	..	..	..	..	..	..	0·7	0·9
Wollongong — Port Kembla No. 9.	Mean	..	..	..	..	..	..	..	..	..	0·2	0·5	0·3
	Highest Day	..	..	..	..	..	..	..	..	..	0·7	1·6	1·0
Cessnock	Mean	0·5	0·6	0·5	1·2	2·0	2·1	2·0	1·3	1·4	1·0	0·7	0·8
	Highest Day	1·1	1·2	0·9	2·2	4·4	3·8	3·5	2·6	2·6	2·5	1·3	1·1

Table XXIII—Sulphur Dioxide Concentrations in New South Wales

Location	Result	Sulphur Dioxide Parts per Hundred Million											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Sydney—City 2	Mean	0·7	0·5	1·3	0·5	2·6	1·9	2·7	2·3	1·6	1·9	1·3	0·8
	Highest Day	2·8	1·7	3·1	2·1	4·9	5·7	5·7	4·3	4·3	3·9	3·1	1·9
Sydney—City 3	Mean	5·8	5·5	4·4	4·5	4·4	4·2	3·6	3·8	4·0	3·8	4·2	5·4
	Highest Day	9·0	8·6	8·2	6·2	6·7	6·9	4·9	6·0	5·4	5·4	7·4	8·7
Sydney—Paddington	Mean	0·7	0·9	1·0	0·5	3·1	3·2	2·5	1·8	1·6	1·8	1·9	2·1
	Highest Day	1·0	2·6	3·2	1·4	7·6	5·4	5·7	3·4	4·0	3·5	3·0	3·0
Sydney—Balmain	Mean	1·2	1·1	1·2	1·6	1·9	2·1	1·9	1·4	1·5	1·4	1·2	1·2
	Highest Day	2·4	1·5	2·5	2·9	3·2	3·9	4·0	3·9	3·0	3·0	2·5	1·8
Sydney—Annandale	Mean	0·7	0·4	0·7	0·2	1·3	1·5	1·3	0·8	0·9	1·2	1·2	0·7
	Highest Day	2·0	1·6	1·5	0·8	2·4	2·7	2·5	2·4	4·1	2·5	2·0	1·5
Sydney—Redfern	Mean	1·4	1·2	1·7	0·8	2·6	3·0	2·8	2·3	2·3	2·9	3·5	3·4
	Highest Day	3·5	2·6	5·2	2·8	4·2	5·3	4·4	4·0	5·2	6·3	6·7	5·8
Sydney—North Sydney	Mean	1·1	0·8	0·8	1·1	1·7	1·9	1·6	1·2	5·2	1·6	1·3	1·1
	Highest Day	2·4	1·7	1·5	1·7	2·2	3·5	2·8	3·1	15·6	2·2	2·2	1·8
Sydney—Matraville	Mean	1·1	1·4	1·1	1·7	2·1	2·5	2·8	3·1	2·4	1·6	1·5	1·1
	Highest Day	2·1	2·8	2·7	4·1	5·3	3·6	5·0	8·2	14·9	7·4	3·0	2·0
Newcastle—City 1	Mean	5·1	3·3	0·9	0·9	1·3	2·1	1·2	1·3	1·4	1·6	1·4	2·4
	Highest Day	10·0	10·6	3·7	5·3	5·5	5·1	3·8	4·2	3·0	4·1	3·6	6·4
Newcastle—City 2	Mean	2·5	0·4	0·2	1·1	0·1	0·02	0·5	0·8	1·6	1·5	1·0	1·4
	Highest Day	6·1	0·9	1·9	2·9	1·7	0·4	5·4	3·8	13·0	5·4	2·4	3·6
Newcastle—Mayfield 4	Mean	1·5	0·6	0·4	0·8	0·3	1·0	0·9	1·2	1·3	1·0	1·0	1·5
	Highest Day	6·6	1·6	1·7	2·4	0·9	2·2	3·0	3·1	3·1	2·3	2·1	3·0
Wollongong — Port Kembla No. 1.	Mean	3·4	5·2	1·6	3·4	0·6	1·4	1·4	1·6	1·9	2·7	6·9	3·7
	Highest Day	11·9	16·0	8·2	14·3	3·6	7·7	7·1	11·1	12·6	13·4	22·0	17·8
Wollongong — Port Kembla No. 2.	Mean	0·8	2·1	1·1	1·2	0·3	0·6	0·3	0·4	1·0	1·2	3·2	1·7
	Highest Day	4·0	6·1	7·7	11·9	3·3	2·4	1·8	6·0	6·1	5·2	10·3	5·7
Wollongong — Port Kembla No. 3.	Mean	5·7	10·8	1·5	2·8	0·7	0·8	1·0	1·1	2·4	2·9	7·2	7·2
	Highest Day	32·7	62·2	9·6	15·8	8·3	6·4	9·4	4·6	13·6	13·6	32·9	34·8
Wollongong — Port Kembla No. 4.	Mean	0·8	0·9	1·6	1·0	0·4	0·6	0·3	0·8	1·2	2·3	2·1	1·9
	Highest Day	5·5	5·5	4·5	6·2	3·2	6·0	3·4	5·6	6·7	23·9	5·6	5·4
Wollongong — Port Kembla No. 5.	Mean	0·9	4·7	1·9	2·4	0·9	2·7	2·1	4·4	2·7	1·9	2·4	1·9
	Highest Day	4·3	57·6	15·6	12·4	6·9	17·21	4·4	19·1	15·4	12·0	7·4	4·1
Wollongong — Port Kembla No. 6.	Mean	0·1	0·2	0·1	0·1	0·04	0·1	0·03	..	..	0·04	0·6	0·4
	Highest Day	1·3	0·6	0·8	0·9	0·2	0·4	0·2	..	..	0·2	3·2	1·5
Wollongong — Port Kembla No. 7.	Mean	..	..	..	..	..	..	..	..	..	0·8	1·3	1·1
	Highest Day	..	..	..	..	..	..	..	..	..	2·8	4·5	3·2
Wollongong — Port Kembla No. 8.	Mean	..	..	..	..	..	..	..	..	..	..	0·6	0·4
	Highest Day	..	..	..	..	..	..	..	..	..	..	3·1	1·7
Wollongong — Port Kembla No. 9.	Mean	..	..	..	..	..	..	..	..	..	1·0	1·1	0·8
	Highest Day	..	..	..	..	..	..	..	..	..	3·0	2·9	1·7

Table XXIV—Oxidant Concentrations in Sydney during 1959

As Ozone, Parts per Million

Month	City 2		City 3	
	Mean	Highest Daily	Mean	Highest Daily
January	0·021	0·040	0·027	0·064
February	0·015	0·088	0·035	0·060
March	0·022	0·050	0·035	0·083
April	0·025	0·075	0·026	0·069
May	0·031	0·069	0·042	0·091
June	0·042	0·094	0·054	0·130
July	0·042	0·045	0·053	0·080
August	0·029	0·054	0·069	0·126
September	0·033	0·064	0·081	0·140
October	0·026	0·054	0·049	0·090
November	0·003	0·029	0·025	0·045
December	0·003	0·019	0·044	0·126

G. School Medical Service

ANNUAL REPORT, 1959

Director: Dr. E. S. A. Myers.

Deputy Director: Dr. N. S. Solomons.

During 1959 funds were made available to implement a number of the recommendations of the special committee set up by the Public Service Board to review the activities of the School Medical Service. Medical Officers and nurses may now be recruited specifically for duty in the metropolitan area, Newcastle, Wollongong, and in country areas. During the year no difficulty was experienced in recruiting medical officers for the metropolitan area, but as in the past, it was difficult to fill the positions in Newcastle, Wollongong and other country areas, Sixteen new positions for medical officers and twelve new positions for school nurses have been created.

Approval was given for the appointment of a senior psychiatrist in charge of Child Guidance Clinics, and applications have been called for this position. It is anticipated that an early appointment will be made.

The urgent need for a Child Guidance Clinic in Newcastle has been realised for a considerable time, and it is hoped that its establishment will be approved during the coming year. Accommodation will be available in Newcastle for the clinic, as well as for the establishment of a Child Health Centre similar to that at Forest Lodge, which has already proved to be eminently successful.

Medical Inspection of School Children

Owing to the shortage of staff, the medical inspection of school children in the metropolitan area, Newcastle and Wollongong was again not completed in 1959, fewer schools being visited than in 1958.

In the schools visited, children were fully examined at entrance (kindergarten or first grade), reviewed with particular reference to hearing and vision whilst in fourth grade, and again fully examined whilst in first year (or equivalent class) and in fourth year during secondary school. Many children were presented by teachers and school nurses for examination in other classes, and the conditions of other children was reviewed, following notation to that effect by the medical officers who had seen the children the previous year.

During 1959 medical officers of this Service examined 135,513 children, of whom 73,734 were fully examined, and 61,779 were reviewed, 14,080 of the latter group being in 4th grade (Table I).

TABLE I

	1954	1955	1956	1957	1958	1959
School population	627,443	657,567	687,178	715,002	743,726	763,071
Number of pupils fully examined and reviewed	152,138	161,581	162,945	130,495	152,620	135,513
Number of pupils fully examined	108,806	95,338	86,666	69,688	83,312	73,734
Number of pupils examined in 4th grade	11,106	22,813	26,993	18,855	20,089	14,080
Other reviews	32,226	43,430	49,286	41,952	49,219	47,699
Number of pupils fully examined and number reviewed in 4th grade, expressed as percentage of school population.	19·11	17·97	16·54	12·38	12·90	11·51

Table II shows in detail the number of children who were fully examined or whose cases were reviewed, in the metropolitan area, country and the whole of the State, in primary and secondary schools for the years, 1957, 1958 and 1959.

Table III shows the number of pupils who were fully examined or whose cases were reviewed and the school population in the metropolitan area, remainder of the State, and New South Wales, for the year 1959.

Excluding dental defects, defects of a notifiable standard were found in 26·9 per cent. of the children fully examined, compared with 25·2 per cent. in 1958. The most important defects found are shown in Table IV. Of the 19,834 defects recorded (this total does not include dental defects), it was found necessary to notify 61·9 per cent. of them to parents or guardians, in order that further investigation and/or treatment could be effected.

Although a thorough dental examination is still not carried out by our medical officers, they found it necessary to notify the parents of 15·9 per cent. of the children fully examined that their oral condition needed urgent attention or was detrimental to their health. The comparable figure for 1958 was 4·9 per cent., and for 1957 it was 1·9 per cent., so that over the last two years the incidence has apparently trebled each year. Medical officers are apparently becoming more and more conscious of the need for improved dental care and the dental state of school children is a matter of grave concern.

There was again a large increase in the number of parent interviews during the year. Parents interviewed by the medical officers during 1959 numbered 6,969, compared with 5,969 in 1958. The percentage of parents interviewed to the number of children fully examined in 1959 was 9·5, compared with 7·2 per cent. in 1958.

At Forest Lodge Child Health Centre " warning letters " are sent to parents of children in 2nd, 3rd, 4th and 5th years, and in the rest of the State they are sent to parents of children in 4th and 5th years. These letters indicate to the parents defects which have been found and which might debar acceptance as trainee teachers. The total number of these letters sent in 1959 was 906, compared with 501 in 1958. At the same time the parents were informed that this Service would be prepared to give a definite opinion on the suitability of the children, if desired. Many parents accepted this offer and 166 children were examined.

During the year visits were paid to nursery schools by medical officers of this Service, the details of which are given in a later part of this report.

CHILD HEALTH CENTRE, FOREST LODGE

The Child Health Centre was opened on 1st July, 1958. The work of the Centre is carried out partly at the schools, partly in the homes, and partly at the Centre itself. Normal school medical examinations of pupils are carried out at the schools by medical officers and nurses, home visiting is carried out by the school nurses in order to follow up school children who are found to have defects at the school visit, and special interviews with parents and children are arranged at the Centre by the medical officers for those cases needing special or prolonged attention, such as disturbed or maladjusted children, for cases specially referred by the school counsellors and teaching staff, and also when requested by parents.

As indicated in the 1958 Annual Report, the main object of this Centre is to provide a more intimate and continuous service than that given by the School Medical Service generally, Enlargement of the medical staff in 1959 has placed this objective within reach. Reasonable time is now spent in the schools and good relations have been established with the school staffs, so paving the way for satisfactory medical inspections. Frequent discussions of problems and interchange of viewpoints with school principals, departmental heads, teachers and school counsellors have led to a better understanding of pupil problems.

The allotted programme of medical inspections for the 94 schools in the area during 1959 was completed, and 23,864 children were examined in the schools during the year, consisting of 9,537 full examinations and 14,327 review examinations.

In an attempt to obtain parent co-operation, parent interviews have been arranged at the schools whenever possible, Parents of all infants having their first medical examination have been invited to be present. In all, a total of 2,933 parent interviews were held during the year. In addition to the help given parents for specific problems, the interview situation was used as a health education session, advice and pamphlets concerning mental health, immunisation, nutrition, and others, frequently being introduced. A very favourable impression has been gained from the response of parents at these interviews. It is proposed to emphasise this aspect in 1960.

Additionally, six nursery schools are visited by one of the medical officers each month, 63 visits being made during 1959. During these visits 473 children were medically examined, the number of examinations being 897 and the number of defects notified to parents was 108. During the visits to the school the parent of every new child enrolled is invited to the school for interview by the medical officer and altogether 323 parent interviews were conducted.

The follow-up procedure carried out by nurses attached to the Centre has been expanded considerably during the year. These nurses visit the schools frequently for this purpose, and during these visits are enabled to discuss with the teachers any child who they feel has developed any problem, either physical or psychological, since the previous visit of the doctor. The nurse in many cases then refers the child for examination by a medical officer at the Centre. The follow-up nurse also visits the child's home, when considered necessary, to interview the parents and advise them of defects and the necessity for treatment, and also in order to determine whether the parents have indeed taken any remedial steps in regard to defects of which they have been notified by the medical officer.

During the year, 289 school visits were made by these nurses, and 5,702 children seen by them. They also made 2,799 home visits. The nurses referred 254 children to the Centre for examination by the medical officers, but unfortunately a considerable number of parents refused to accept an appointment.

This follow-up service demands a large expenditure of time by the nurses. Mothers are frequently out when the nurse calls and although she may leave a card telling the mother of her visit, it is frequently necessary to revisit the home. In some places when both parents work, it is necessary for the nurse to visit the place of employment of the mother in order to gain contact, and of course, difficulties are often experienced, and a considerable amount of time may be wasted owing to delays in public transport. Nevertheless it is felt that the advantages of this system outweigh by far any of its disadvantages.

A card system has been devised in an attempt to asses the follow-up system. A survey of these cards for children attending 50 schools which were medically examined during the first two terms of 1959 reveals that 1,206 defects were followed up by the nurses. Of these, they report that 821 (68·1 per cent.) were considered adequately attended to, and 473 (39·2 per cent.) had obtained adequate attention within two months of notification to the parents. At the end of second term, 286 (23 per cent.) defects were still untreated. A further 97 (8 per cent.) of the defects were followed up until it was apparent that spontaneous resolution had occurred.

Certain limiting factors must be recognised in drawing conclusions from this survey. Defects are classified as " adequately attended to " when there is reasonable evidence that the child has attended either a hospital, clinic or doctor. The ultimate result of such attendance is not always known. However the staff of the Centre does keep track of these children and watches their progress, advising the parents accordingly where necessary.

The consultative service for teachers and other officers working in allied fields has been used extensively. Most enquiries are made concerning infectious diseases and infestations. Teachers appear to appreciate authoritative and prompt guidance in these matters.

Relations with general practitioners and hospitals of the district have continued to be satisfactory Reports concerning consultations have been exchanged, with mutually helpful results. The Division of Guidance and Adjustment of the Department of Education has also co-operated generously with the Centre. Exchange of reports and information has been most helpful to both services.

The preliminary training of newly recruited medical officers and nurses of the School Medical Service is undertaken at the Centre schools, thus giving new staff the opportunity to see and appreciate the more intimate and continuous service given by the Centre.

The medical staff of the Centre has also given lectures and demonstrations of the work and aims of the Centre to post-graduate medical students, groups of trainee teachers and trainee school counsellors. Many talks were also given to organisations such as Parents and Citizens' Associations and Mothers' Clubs.

Medical officers at the Centre examined 394 children during the year. Of these, 276 were new cases referred mostly by teachers, and 118 were reviews of cases already seen. The analysis of the reasons for examination of the 276 new cases is as follows:—

		Per cent.
Mental Health—		
Emotional disturbances, maladjustments, behavious problems, etc.	142	51·4
Mental retardation	25	9·1
Suspected physical defects	68	24·6
Mixed or doubtful mental and physical defects (including speech defects, nocturnal enuresis, headaches and migraine, epilepsy, parent anxiety states requiring reassurance, and so on).	41	14·8
Total	276	

It is interesting to note that of these 276 cases referred to the Centre for examination, 237 were referred by departmental schools and 39 by non-departmental schools.

In all cases the children were accompanied by a parent or guardian, and the majority were referred by school authorities. In 1960 attempts will be made to reach many more parents who are believed to be in need of help for their children, but who are not aware of the facilities available. For example, the field of the preschool children over the age of 2 years is to be explored by further talks to the mothers' clubs and by circulars to the small private nursery schools of the area.

A speech therapy clinic was commenced in February at the Centre, and during the year 469 cases were referred for assessment and treatment. At the end of the year 212 children were still awaiting an initial interview. It is hoped that with the appointment of a second speech therapist early in 1960 this position will improve. The details of the speech therapy clinic activities are shown in the report of the speech therapy clinics for the whole of the Service.

During 1959 the staff at the Centre was augmented and now consists of 1 medical officer in charge, 3 medical officers, 8 nurses, 1 speech therapist and 1 clerical officer.

It is hoped that a hearing clinic will commence at the Centre early in 1960.

Case conferences are held weekly, with a child psychiatrist from one of the child guidance clinics attending. These conferences have been most stimulating to the medical staff of the Centre, and as a result the medical officers are gradually undertaking more and more counselling in the minor mental health problems found in the school children.

The premises have undergone further changes and improvements. In recent months the ground floor has been prepared for new activities in 1960. Included in the new section are a hearing clinic room, audiometry room, two speech therapy rooms, a lecture room and an amenities room. Tidying up and paving of the back portion of the grounds have been approved. It is expected that all this work will be finished within a few weeks.

SCHEME FOR MEDICAL EXAMINATION OF SCHOOL CHILDREN CONDUCTED BY LOCAL MEDICAL PRACTITIONERS FOR LOCAL SHIRE AND MUNICIPAL COUNCILS

As a result of the successful inauguration during 1958 of a scheme for the medical examination of school children in the Lyndhurst Shire by local medical practitioners, representations were made to this Service for the implementation of similar schemes by several other Councils.

During the year, the Deputy Director of the Service visited Queanbeyan for a conference with the Yarrowlumla Shire Council and the doctor at Captain's Flat; Kelso for a conference with the Turon Shire Council and the local medical practitioners; Young for two conferences, one each with the Young Municipal Council and the Burrangong Shire Council, and a separate meeting with the local medical practitioners in Young; and Goulburn for a conference with Mulwaree Shire Council and the local medical practitioners.

Following these conferences it was decided that the medical examination of the school children in Captain's Flat in Yarrowlumla Shire (which is an isolated community with one resident doctor) and all of Turon Shire should be undertaken by the local medical practitioners working under the supervision of this Service, and that the examinations should be carried out in accordance with the normal School Medical Service requirements. Unfortunately, no agreement with the doctors in Young could be reached, and the scheme in regard to Young Municipal Council and Burrangong Shire Council is in abeyance. With regard to Mulwaree Shire Council negotiations are still in progress.

The medical examinations of school children proceeded during 1959 in the Lyndhurst Shire and it was decided that all the schools should be visited once each year.

As a result of these schemes there are 35 schools being visited in country areas with an estimated school population of approximately 2,000. Most of these schools are in small isolated communities scattered throughout the rural areas of the Councils concerned.

As a result of a recommendation of the special committee set up by the Public Service Board, to examine the development and expansion of the School Medical Service, funds have been made available for the reimbursement of Shire and Municipal Councils of fees paid to local medical practitioners for the medical examination of school children on a sessional basis, similar to the arrangement with regard to the various immunisation schemes. It is anticipated that, as a result of this, there will be a large number of councils making representations for the implementation of the scheme in their areas during 1960.

MEDICAL INSPECTION OF SPECIAL SCHOOLS

During the year visits were continued to departmental schools for retarded children and also to schools and homes conducted by volunatary organisations for handicapped and retarded children. These visits were directed towards the correction of physical defects which could be contributing towards apparent retardation, and also endeavouring to find the original cause of the retardation in cases in which no investigation had been undertaken. Defective vision was the most common disability, but defective hearing, skin rashes and minor orthopaedic defects were also found. Many retarded children are grossly overweight, and dietary advice resulted in improvement in appearance and fuller participation in physical activities.

Many parents were advised to seek full clinical investigation and advice or treatment from their general practitioners, the Royal Alexandra Hospital for Children and other hospitals, the Northcott Neurological Centre, the Spastic Centre, and in many cases considerable improvement resulted.

Close liaison has been maintained with the child guidance clinics, which have given considerable help, both in intelligence testing of children and long term therapy to parents with management problems. Additionally the psychiatrists at the clinics advise regarding suitability for admission to the new children's unit at the North Ryde Psychiatric Centre. This unit opened during 1959 and problem children from Glenfield Park Public School and many of the voluntary association centres were admitted for treatment.

Co-operation with the Department of Education has been most satisfactory. Many cases were referred to the Division of Guidance and Adjustment for advice regarding school placement, and others were referred by that Division to this Service for advice on physical and mental abnormalities.

Intelligence testing was undertaken by a psychologist from this Service in the various voluntary association centres, and this helped considerably with class placement.

The excellent liaison with the special counsellor for the deaf and the blind facilitated the work at Wahroonga School for the Blind, and enabled several children suffering from both grossly defective vision and mental retardation to be transferred to the Condover group at the school.

Visits to Child Welfare Department homes were continued during 1959, with the object of observing the children's behaviour in their own environment, particularly in cases where transfer to mental hospital was sought. In some cases transfer was considered necessary; in others, it was possible to make suggestions concerning treatment aimed at the improvement of mental and physical disorders contributing towards the retardation or anti-social behaviour.

The introduction of the new procedure for voluntary admission to mental hospitals has reduced the difficulties which were originally associated with the certification of mentally defective children. Some difficulties are still encountered in the case of Child Welfare Department wards in their late teens who are not grossly retarded but who present difficulties in placement and care in the community which are almost insurmountable.

During the year Dr. Hilliard, from the Fountain Hospital, London, paid a visit to Australia and visited schools and institutions for retarded children. He visited Glenfield Park Public School, Hassall Street School, Parramatta, Albert Road School, Strathfield, and Crowle Home, Ryde, and was impressed with the high standards of educational and medical care at the schools, his only criticism being that many more such schools are desirable in New South Wales.

This year showed a great awakening of interest on the part of parents, teachers and the general community in the problems of the retarded child, possibilities of a more accurate diagnosis and treatment, and the necessity for full physical fitness in order that the child may participate in educational and occupational therapy schemes. Many special schools are now equipping their own medical rooms and the demand for medical help is likely to increase in the future.

The following special schools conducted by the Department of Education were visited during the year: Wahroonga School for the Blind, Glenfield Park Public School; Hassall Street Public School, Parramatta; Albert Road School, Strathfield; Cromehurst Public School, Lindfield; and Loftus Street Public School, Arncliffe.

Schools and homes conducted by voluntary organisations visited were: Crowle Home, Ryde; Eurella House, Burwood; Sunnyfield, Manly; St. George, Kogarah; Sydenham-Bankstown; Sutherland Shire Handicapped Centre; Windgap, Coogee; Greenacres, Wollongong.

In addition, Child Welfare Department institutions visited were: Brush Farm Home, Eastwood; May Villa Home, Dundas; and Myee, Arncliffe.

Information concerning the activities of this Service in the special schools and homes during the year 1959 is given hereunder.;—

	Time Spent (days)	No. of Exams		No. of Defects Notified	Parents Interviewed
		Full	Review		
Education Department—					
Blind School, Wahroonga ..	5½	59	14	15	1
Glenfield Park	11½	6	164	46	4
Hassall Street	8½	94	23	44	5
Albert Road	3½	32	..	16	1
Cromehurst	2½	26	..	6	1
Loftus Street	3	28	..	8	3
Child Welfare Department—					
Brush Farm	2	9	..	..	..
May Villa	1½	7	..	..	..
Myee	1	9	..	..	..
Other Organisations—					
Crowle Home	9½	82	1	36	7
Euralla House	3½	23	..	6	13
Sunnyfield	2	25	..	12	1
St. George	2	18	..	6	8
Sydenham-Bankstown.. ..	5	40	..	11	23
Sutherland Shire	6½	50	2	9	25
Windgap	2	19	..	1	13
Greenacres	3	20	..	2	14

NURSERY SCHOOLS

Children were examined in thirteen nursery schools during 1959. These schools were visited once each month, and altogether 116 visits were made to the 13 schools, 6 of which are in the Forest Lodge Child Health Centre area. The number of children examined at nursery schools totalled 788, and the number of medical examinations carried out on these children was 1,548.

In addition, the medical officers interviewed the parents of all children on their admission to the school, and any other parents they felt it necessary to interview throughout the year in order to obtain a history and discuss any defects found. The total number of these interviews was 488.

The following table shows the defects of notifiable standard found in the children examined expressed as a percentage.

Defect	Boys 403	Girls 385
Vision	..	0·51
Squint	2·23	2·83
Hearing	0·99	1·03
Nose and throat	4·96	1·55
Skin	2·73	3·09
Heart	0·50	0·51
Lungs	2·23	1·55
Asthma	3·97	0·51
Development-Hernia	0·74	0·26
Orthopaedic	10·42	12·1
Nervous system	0·74	..
Maladjustment and behaviour problems	1·73	2·06

School Sanitation

Following each visit to a departmental school, a report is submitted by the medical officer concerning its sanitation. Of the 309 schools visited throughout the State during 1959, the accommodation was considered to be satisfactory in 87·06 per cent. The sanitation (including toilet, drinking and ablution facilities) was found to be unsatisfactory in 20·38 per cent. of the schools visited, and the reports also revealed that the buildings and grounds were in an unsatisfactory state in 26·86 per cent.

It is pleasing to note that, compared with 1958 and previous years, an improvement in accommodation, sanitation and the state of buildings and grounds of the departmental schools in New South Wales is being maintained.

Following receipt of the reports from medical officers of this Service, the Department of Education is notified immediately of the conditions found.

Child Guidance Clinics

Serious interruptions of the work of the child guidance clinics again occurred during 1959 owing to changes in staff by resignations, transfers and new appointments. Nevertheless, during the year 2,813 new cases were seen, compared with 2,635 during 1958. Of the new cases, 2,173 were boys and 640 were girls, and 1,332 were boys who were examined at the Yasmar Child Guidance Clinic (see Table V.).

In July approval was obtained for the erection of a new building at Brisbane Street for the child guidance clinics, following the recommendations of the special committee set up by the Public Service Board to plan for the future of child guidance clinics. It is hoped that the building will be completed early in 1960, and that it will enable several clinics to work together under the one roof. Approval was also obtained for the establishment of the position of Senior Pyschiatrist to the Child Guidance Clinics and applications have been called for this position.

There are still large waiting lists at all clinics, and it is hoped that the expansion of the service mentioned above will reduce these.

The staffs of the clinics have been intensively employed on a very full training programme covering Diploma of Psychological Medicine students, Fellows in Psychiatry, medical students, social studies students, school counsellors, and others.

The psychiatrists have also conducted weekly case conferences with the medical officers attached to Forest Lodge Child Health Centre. These conferences have greatly benefited the medical officers as well as the cases discussed, and are used as a means to instruct them how to counsel minor behaviour and personality disorders. Next year it is hoped to give inservice training to at least a proportion of school medical officers in the type of counselling which, if carried out by them, should materially assist in lessening the load on the child guidance clinics.

Since October this year at Yasmar Child Guidance Clinic an attempt has been made to institute a certain amount of therapeutic work by reorganisation, but only a small number of children were able to be brought into treatment, due to the heavy diagnostic load.

The psychologists at the various clinics continued to accept cases referred for intelligence testing from speech therapists of the Service and school medical officers.

There are many problems associated with the child guidance clinics, and it is hoped that with the early appointment of a Senior Psychiatrist, a more satisfactory service will be evolved.

In Table V the statistical data for clinics Nos. 1 and 5 are combined, as owing to a large number of staff changes it is difficult to separate the figures.

Speech Therapy

At the beginning of the year 10 speech therapy clinics were in operation in the metropolitan area. Early in February a clinic was started at Forest Lodge Child Health Centre, and in April a speech therapist, at her own request, was transferred from the metropolitan area to Cooma North, and clinics were established at Cooma North and Canberra, A.C.T. At the end of February it was necessary to close the Beauty Point clinic owing to the resignation of the speech therapist, but the clinic was re-opened in June with the appointment of a replacement therapist.

The Forest Lodge Child Health Centre Clinic from the outset has functioned with a heavy case load and a large waiting list, and it intended that another speech therapist should be appointed to this clinic when further accommodation becomes available early in 1960.

The clinic in Cooma-Canberra functions for three days a week at Cooma in accommodation provided by the Snowy Mountains Authority in their Neighbourhood Centre at Cooma North, and for two days a week in Canberra in a clinic provided by the Department of the Interior at Turner Primary School.

A speech therapist continued to give speech therapy on one day a week to both the School for the Blind, Wahroonga, and Glenfield Park Public School.

There have been during the year large waiting lists at all the clinics (totalling 958 at the end of the year), and in some instances children have waited for twelve months before an appointment was available for interview. The need is still great for many more clinics to be established, both on account of the large waiting lists and also for the reason that many children need to travel long distances, resulting in loss of considerable school time.

It has been found impossible to establish clinics in country areas, and the only service that can be offered to children with speech defects in the country is, if the parent is able to arrange it, for the parent and child to be interviewed at a metropolitan clinic where advice is given regarding the general management of the child and his speech problems. In a few cases arrangements can be made for the child to be given more active treatment at a clinic during school vacations.

One departmental trainee successfuly completed her speech therapy training course and joined the staff in 1959. Speech therapy traineeships were suspended in 1958, but it is intended that they should be resumed in 1960, and applications for six traineeships have been called for.

The number of cases handled during the year was 953, compared with 849 in 1958. The speech therapy clinics are at present only able to select the cases which appear to be suffering from the more serious disorders, and this results in the treatment programme being more extensive and time consuming than in milder cases.

During the year liaison was continued with the medical profession and other professional workers in the fields of education and social welfare, and liaison has also been maintained with the child guidance clinics.

Staff meetings and case discussions were held every six weeks, and resulted in stimulating interest and affording an opportunity for exchange of ideas amongst the therapists.

In September the senior speech therapist visited Wollongong to investigate the possibility of opening a speech therapy clinic in that area, and to inspect possible accommodation. It is felt that there is obviously an urgent need for a speech therapy clinic to be established in this area, and it is hoped that this will come to fruition in 1960.

In November one of the therapists visited Lismore, in response to requests by local authorities, to investigate and give advice to children suffering from speech defects. It was found that many children required treatment, and it is expected that a similar situation would exist in other country areas. This supports the urgent need for the establishment of speech therapy clinics throughout the State.

Statistics relating to the work of the speech therapy clinics during 1959 are set out in Tables VI and VIa.

Hearing Clinic

The hearing clinic continued throughout the year on a full-time basis, ten sessions being held weekly, attended by three visiting ear, nose and throat specialists.

Cases were referred to the clinic by school medical officers, child guidance clinics, speech therapists, the Division of Guidance and Adjustment, Department of Education, and occasionally by ear, nose and throat specialists and doctors in general practice.

The total number invited to attend the clinic was 1,909. Of these 1,452 accepted appointments. The number of cases reviewed was 1,261. Detailed information regarding these cases is contained in Table VII.

The clinic concerns itself with diagnosis only, no treatment being undertaken. Children requiring treatment are referred to their local doctor, specialist, or an outpatients' department of a public hospital.

Cases of severe deafness requiring special education are referred to the Division of Guidance and Adjustment for placement in classes for deaf children. During 1959, 19 children were referred for this purpose, and a further 13 children were recommended for admission to the Darlington School for the Deaf. A liaison officer between the School Medical Service and the Department of Education attended this Service regularly to interview children and parents concerning educational problems which could be a factor in their education. Children who the ear, nose and throat specialist felt could gain some benefit from the use of a hearing aid were referred to the Commonwealth Acoustic Laboratories, with a recommendation that favourable consideration be given to the supply of such an aid.

Asthma Clinic

The asthma clinic continued to function full-time for the year. The total number of appointments for initial consultation (that is, new patients) from January to December was 285, of which 222 appointments were kept and consultations held. Of these, the number of children who subsequently undertook treatment was 86.

The number of appointments made for consultation with patients already under treatment totalled 1,234, of which 1,047 were kept.

An interesting point noted was that quite a number of children were recommended to the clinic by their own family doctor. In one instance, nine children were referred by one practitioner and of these eight commenced treatment. In addition, several practitioners telephoned for information regarding the method of treatment given by the clinic, stating that they had become interested since reading an article in the Medical Journal of Australia, in November, 1958. Some of these practitioners also paid a visit to the clinic.

Further progress was made during the year on a survey, commenced in 1958, of all children who began treatment in the years 1951 to 1955 inclusive. To assist in this work, a school nurse visited the homes of these patients to obtain questionnaires from either parents or relatives, and although this project is as yet incomplete, the results to date seem to be far more promising than had been anticipated.

In addition to the ordinary routine work of the clinic, the general survey of results of treatment, which was begun in 1954, was continued during the year and completed for those children who began treatment in 1957. The figures for this survey compare favourably with those of previous years.

The total number of patients commencing treatment in 1957 was 86. Of this number, 17 gave the treatment up within three months. Of the remaining 69, 50 have been followed up for a period of two years or more, this time being taken as our standard period for review. The figures for these patients, showing results of treatment, are set out hereunder:—

		Per cent.	
Excellent	23	46	60
Very much Improved	7	14	
Much Improved	16	32	
Improved	4	8	
No Improvement	0	0	
	50	100	

Surveys of those children beginning treatment in 1958 and 1959 were commenced but were not completed, in view of the necessity to maintain a two year period before assessing results.

Infectious Diseases, other Illnesses and Accidents

During 1959, 26,959 cases of injury and 165,526 cases of illness, other than infectious disease, were reported amongst pupils attending departmental schools, necessitating respectively an average absence from school of 1·4 and 1·14 weeks. In 1958 the figures were 25,571 cases of injury and 142,777 cases of illness. Table 8 shows the number of pupils in departmental schools who suffered from the common infectious diseases for each year from 1950 to 1959, and the average absence from school for each disease during 1959.

During 1959, 3,383 children were notified as suffering from impetigo, requiring an average absence of 1·69 weeks; from ringworm, 3,267, requiring an average absence of 2·08 weeks; scabies, 137, requiring an average absence of 2·19 weeks; and pediculosis capitis, 1,229, requiring an average absence of 1·77 weeks.

It is interesting to note that all these figures show a slight decline in comparison with the corresponding figures for 1958.

The number of children who were absent from school as contacts of infectious diseases during 1959 totalled 6,101, compared with 3,751 in 1958. This increase is probably accounted for by the increase in the number of cases of measles, German measles and whooping cough, and the fact that infectious hepatitis is now a notifiable disease with exclusion of contacts from school, but no figures for this disease are available for 1959.

No serious epidemics of infectious disease occurred in any departmental school during the year.

Control of Tuberculosis in Schools

Close liaison is maintained by this Service with the Division of Tuberculosis in regard to tuberculosis occurring in school children and teachers. Each case is notified from one to the other Division, and the Division of Tuberculosis takes the necessary action for the control of the disease. During 1959 there were 7 such cases amongst school children, and 4 cases amongst teachers and trainee teachers at the University.

During the year, 39 teachers who had a history of having suffered from tuberculosis were reviewed, and an opinion given to the Department of Education regarding their fitness to continue teaching.

Additionally, in compliance with the campaign for the control of tuberculosis, 36 teachers who had suffered from acute respiratory conditions, such as pneumonia or pleurisy, were X-rayed, and an opinion expressed as regards their fitness to continue teaching.

Medical Examination of Teachers and Teachers' College Entrants

The school Medical Service continued to carry out the general administrative medical work of the teaching service of the Department of Education during 1959. The procedure for the medical examination of applicants for teachers' college scholarships was similar to that of 1958, whereby arrangements were made for each applicant to be examined by his own family doctor, and the medical examination record card forwarded under confidential cover to this Service. It was found necessary to review many of these cases by medical examination at head office, in order to finally assess their medical fitness.

Teachers in the service were referred for examination, as in the past, for various reasons, such as questions of sick leave or retirement, determination of fitness for appointment to the permanent staff, transfer from temporary or casual staff to permanent staff, and so on. Where indicated, psychiatric examinations of students and teachers were carried out.

The number of examinations carried out was:—

	1956	1957	1958	1959	
Teacher's college entrants	3,255*	3,775*	675*	2*	By Sch. Med. Service.
			4,462*	5,824*	By private medical practitioners.
Applicants for employment	747	607	740	805	
Sick leave transfer to permanent staff, special examinations, retirement, etc.	895	985	796	840	
Psychiatric examinations	137	175	128	233	
	5,034	5,542	6,801	7,704	

* These figures cover the twelve months period from 1st March of the year indicated.

In addition, the following examinations were carried out:—

Teachers' college entrants reviewed at head office	571
First year students at teachers' colleges re-examined	250
Applicants for overseas exchange	5
Medical re-assessment of graduates from teachers' colleges	176
	1002

Arrangements were made for chest X-ray only in the case of 87 applicants for employment.

The causes of sick leave in the 362 cases examined were as follows:—

	M.	F.	Total
Diseases of the cardio-vascular system	28	16	44
Diseases of the respiratory system—			
Tuberculosis	2	1	3
History of tuberculosis	15	24	39
Other	5	9	14
Gastro-intestinal disease	6	4	10
Malignant disease	4	5	9
Gynaecological disease	..	13	13
Diseases of the genito-urinary system	2	2	4
Diabetes mellitus	..	1	1
Skin disease	1	1	2
Rheumatism and disease of bone	3	6	9
Ear, nose and throat conditions	3	4	7
Eye conditions	2	3	5
Anaemia and general health	1	8	9
Acute infectious disease	1	5	6
Thyroid conditions	2	3	5
Accidents	2	7	9
Disease of central nervous system	8	6	14
Mental disease—			
Psychosis	15	11	26
Psycroneurosis	40	57	97
Control of tuberculosis	20	16	36
Total	160	202	362

During the year the retirement of 31 teachers was recommended, for the following reasons:—

	M.	F.	Total
Diseases of the cardio-vascular system	5	2	7
Malignant Disease	3	..	3
Injuries	1	..	1
Mental disease—			
Psychoneurosis	3	1	4
Psychosis	2	3	5
Disease of central nervous system	4	4	8
Pulmonary tuberculosis	1	..	1
Eye disease	..	1	1
Diabetes	..	1	1
Total	19	12	31

Of the 5,826 candidates examined to determine fitness for entrance to a teachers' college, 150 (2·6 per cent.) failed to pass the medical examination. This percentage of rejections compares with 2·3 per cent. for the previous year. The causes of rejection were:—

	M.	F.	Total
Myopia	2	4	6
Other visual defects	1	3	4
Impairment of hearing	7	6	13
Other E.N.T. conditions (mainly perforated eardrum)	6	4	10
Overweight	8	27	35
Migraine and frequent headaches	3	7	10
Asthma	18	9	27
Orthopaedic conditions	2	6	8
Genito-urinary conditions	..	1	1
Organic heart disease	..	1	1
Hypertension	2	1	3
History of "Nervous Breakdown"	2	3	5
Lung condition	..	5	5
Epilepsy	5	..	5
Skin conditions	..	9	9
Nervous conditions	2	1	3
Diabetes	..	2	2
Other	1	2	3
Total	59	91	150

In addition to the examinations carried out at head office, arrangements were made for the medical examination of applicants for casual or temporary employment in the country, by Government Medical Officers. The number of such examinations was 551, compared with 485 in 1958.

At the end of the year, 1,653 graduates from the various teachers' colleges were assessed medically, to determine their fitness for permanent appointment. The comparable figure for 1958 was 1,608.

Medical Examination of Special Groups of Children

Children were examined at head office at the request of teachers or parents because of special health problems, and at the request of the Department of Education, for example, as to fitness for admission to special schools or classes. Children were also examined at the request of the Child Welfare Department, the Aborigines' Welfare Board, the Far West Children's Health Scheme. Many of the children showed mental retardation, and advice was given to parents and the appropriate Department or authority concerning their care and schooling. The number of examinations carried out during the year was 766 (638 in 1958).

Teachers' Colleges

During 1959, 8 medical officers were attached to teachers' training colleges, 5 full-time and 3 part-time.

In their final year all students received a detailed course of lectures in School Health and First Aid, together with set assignments, and were required to pass examinations in these subjects.

All students were kept under medical supervision. Any defects found at the time of their entrance medical examination were checked from time to time, and students who had sick leave in excess of three days were referred to the medical officer. Students with injuries were examined, and if requiring treatment were referred to the nearest hospital or their own doctor; those who were ill at college were examined and similarly referred. Students with personal, home or study problems which had a medical bearing were interviewed by the medical officer.

The Tuberculosis Division of the Department performed Mantoux texts on all students who entered college in 1959. Those who did not give negative reactions were interviewed by the medical officers at the college and referred for chest X-ray.

In the second half of 1959, 1,653 outgoing students were medically examined for permanent appointment to the teaching service.

Information concerning attendances of medical officers at the various colleges is given hereunder:—

College	Enrolment	Medical Officers
Sydney	1,267 900 University students on scholarships.	2 full-time.
North Newtown Annex	138	1 part-time.
Balmain	267	1 part-time.
Orange Grove Annex	84	1 part-time.
Alexander Mackie	380	1 full-time.
Armidale	416 71 External students	1 full-time.
Bathurst	344	1 part-time.
Wagga	390	1 part-time.
Newcastle	480	1 part-time.

In February and March, 1959, a seminar on school Health Education was held at Sydney Teachers' College. The seminar was led by Dr. Harold Le Maistre, and attended by medical officers attached to the various colleges, as well as educationists of the Department of Education. The purpose of the seminar was to investigate the rôle, nature and further development of health education as it concerns the primary and secondary school child in New South Wales.

The seminar forwarded a comprehensive report following the conferences, and this report and its recommendations are under consideration by the Department of Education and this Service.

National Fitness Camps

Two nurses from the School Medical Service continue to be attached for duty at Point Wolstoncroft and Broken Bay Fitness Camps. These nurses supervise the health of the children attending the camp, attend to all cases of accident or sickness, give talks on hygiene and general health matters to the children, and assist in the general overall supervision of the sanitation and hygiene of the camp itself. A report on all these matters is forwarded to the Director of this Service at the end of each camp.

Co-operation with Child Welfare Department and Outside Bodies

During the year the examination of special groups of children was carried out for the Child Welfare Department—Little Brothers and Fairbridge Scheme—Far West Children's Health Scheme, and Aborigines' Welfare Board. In addition, this Service is able to assist the Child Welfare Department in expressing opinions on the medical fitness of persons for child adoption, in certain cases.

Staff

Establishment: 48 medical officers; 6 psychiatrists; 3 part time ear, nose and throat surgeons; 7 psychologists; 44 nurses; 9 social workers; 12 speech therapists; 6 trainee speech therapists; 15 clerical officers; 1 switchboard operator.

During the year, 1 medical officer, 1 nurse and 1 clerical officer retired; 1 psychiatrist transferred to the Division of Psychiatric Services; and 5 medical officers, 1 psychiatrist, 4 nurses, 2 psychologists, 1 social worker, 5 speech therapists and 2 clerical officers resigned.

Of the officers who retired, Dr. Gillies had been with the Service for seven years, Miss Woodhill, senior nurse, for twenty-two years, and Miss Sherwood, clerk for nine years after serving with the Department of Education since 1920.

The following appointments were made: 11 medical officers; 2 psychiatrists; 12 nurses; 2 psychologists; 2 social workers; 7 speech therapists; 3 clerical officers.

New Positions created during the year: 16 medical officers; 12 nurses.

At the end of 1959, vacancies existed for: 12 medical officers; 5 nurses; 1 speech therapist; 6 trainee speech therapists.

Conclusion

My thanks are due to all members of the School Medical Service for their co-operation and assistance in carrying on the activities of the Service during the year.

TABLE II — NUMBER OF PUPILS WHO WERE FULLY EXAMINED OR WHOSE CASES WERE REVIEWED IN THE METROPOLITAN AREA, REMAINDER OF STATE AND NEW SOUTH WALES, 1957, 1958 AND 1959

	Metropolitan Area			Remainder of State			New South Wales		
	1957	1958	1959	1957	1958	1959	1957	1958	1959
Primary									
Full Examination—									
Kindergarten and Grade I	22,504	30,425	22,320	5,823	5,882	4,151	28,327	36,307	26,471
Others	6,037	10,782	10,118	2,387	1,817	2,711	8,424	12,599	12,829
Total—									
Full Examinations	28,541	41,207	32,438	8,210	7,699	6,862	36,751	48,906	39,300
Reviews	39,399	44,953	40,378	7,055	7,513	3,720	46,454	52,466	44,098
Grand Total	67,940	86,160	72,816	15,265	15,212	10,582	83,205	101,372	83,398
Secondary—									
Full Examination—									
Year 1	21,778	22,346	20,031	4,933	5,139	5,894	26,711	27,485	25,925
Year 4	4,082	3,934	4,126	906	1,043	1,304	4,988	4,977	5,430
Others	998	1,731	1,710	240	213	1,369	1,238	1,944	3,079
Total—									
Full Examinations	26,858	28,011	25,867	6,079	6,395	8,567	32,937	34,406	34,434
Reviews	12,464	14,473	15,435	1,889	2,369	2,246	14,353	16,842	17,681
Grand Total	39,322	42,484	41,302	7,968	8,764	10,813	47,290	51,248	52,115
Total Full Examinations	55,399	69,218	58,305	14,289	14,094	15,429	69,688	83,312	73,734
Total Reviews	51,863	59,426	55,813	8,944	9,882	5,966	60,807	69,308	61,779
Grand Total	107,262	128,644	114,118	23,233	23,976	21,395	130.495	152.620	135,513

TABLE III — NUMBER OF PUPILS WHO WERE FULLY EXAMINED OR WHOSE CASES WERE REVIEWED, AND SCHOOL POPULATION IN METROPOLITAN AREA, COUNTRY, AND NEW SOUTH WALES, 1959

	Metropolitan Area	Country	Total
	Percentage	Percentage	Percentage
Primary Schools—			
Population	297,863	262,944	560,807
No. of Full Examinations	32,438 (10·89)	6,862 (2·61)	39,300 (7·01)
No. of Reviews	40,378 (13·56)	3,720 (1·41)	44,098 (7·86)
Secondary Schools—			
Population	117,328	84,936	202,264
No. of Full Examinations	25,867 (22·05)	8,567 (10·09)	34,434 (17·02)
No. of Reviews	15,435 (13·16)	2,246 (2·64)	17,681 (8·74)
Total—			
Population	415,191	347,880	763,071
No. of Full Examinations	58,305 (14·04)	15,429 (4·44)	73,734 (9·66)
No. of Reviews	55,813 (13·44)	5,966 (1·71)	61,779 (8·10)

TABLE IV—DEFECTS OF NOTIFIABLE STANDARD FOUND IN PUPILS FULLY EXAMINED, 1959 AND EXPRESSED AS A PERCENTAGE

	Primary		Secondary		All Pupils	
	Boys	Girls	Boys	Girls	Boys	Girls
No. Examined	20,276	19,024	18,677	15,757	38,953	34,781
Defects—						
Vision	3·8	4·0	5·4	4·6	4·6	4·3
Squint	·7	·7	·3	·5	·5	·6
Hearing	4·3	3·6	2·1	1·8	3·3	2·8
Nose and Throat	2·0	2·0	·4	·8	1·2	1·4
Skin	1·8	1·5	1·2	·6	1·5	1·1
Thyroid	·05	·2	·1	·5	·1	·3
Heart	·5	·5	·4	·2	·4	·4
Lungs	3·4	3·0	1·2	·5	2·4	1·9
Asthma	3·6	2·5	2·9	·7	3·3	1·7
Development—Hernia	·7	·4	·4	·01	·6	·2
Orthopaedic	2·6	2·0	1·7	·9	2·2	1·5
Nervous System	·3	·2	·3	·1	·3	·2

TABLE V—CASES SEEN BY CHILD GUIDANCE CLINICS, 1959

	* Clinics Nos. 1 and 5	Clinic No. 2	Clinic No. 3	Clinic No. 4
No. of new cases	770	333	Referred by Court 842 Committed to an Institution (Statutory examintion) 490	378
Sex—				
Male	500	153	1,332	188
Female	270	180	..	190
Total No. of Interviews	4,870	3,143	..	3,755
Ages—				
0- 5 years..	45	23	..	22
5-10 years..	278	131	81	146
11-15 years..	354	151	955	174
Over 15 years	93	28	296	36
Sources of referral—				
Personal application	256	87	..	135
Children's Courts	186	85	..	105
Child Welfare Department	72	6	..	2
Education Department	67	84	..	46
Hospitals, Social Agencies	79	24	..	19
Medical practitioners	58	19	..	17
School medical officers	45	26	..	30
Speech therapists	7	2	..	24
Classification—				
Aggression	292	165	249†	203
Non-aggression	123	98	249	62
Somatic complaint	61	11	80	10
Mental retardation	113	33	53	7
Mixed	179	26	248	96
Unknown	2	..	..	..

* Combined owing to number of staff changes.

† 879 boys showed signs of disturbance.

Table VI—Statistics Relating to the Work of Speech Therapy Clinics, 1959

	Beauty Point	Camper-down No. 1	Camper-down No. 2	Darling-ton	Forest Lodge	Padding-ton	Parra-matta	Rockdale No. 1	Rockdale No. 2	Waterloo	Willoughby	Glenfield Park	Blind School, Wahroonga	Cooma North	Canberra A.C.T.	Total
No. of first interviews	64	50	16	54	128	73	85	73	65	38	64	..	6	43	37	796
Admitted or re-admitted to treatment ..	64	32	21	44	84	54	51	46	58	37	44	12	2	28	28	605
Under treatment 1st January ,1959 ..	29	28	40	22	..	28	60	26	17	35	34	..	11	..	..	330
Total cases treated 1959	93	60	61	66	84	82	111	72	75	72	78	12	13	28	28	935
No. of reviews	31	2	32	53	15	60	..	3	22	17	..	..	3	..	1	239
Total No. of attendances, 1959 ..	893	1,272	983	1,195	1,226	1,604	1,682	1,199	1,231	1,433	1,308	316	269	466	435	15,512
Failed to continue treatment	..	11	11	12	12	11	11	4	5	8	5	..	..	4	..	94
Treatment deferred	..	..	..	..	..	..	..	3	7	..	..	..	..	..	..	10
Transferred to other clinics	4	..	..	..	..	..	..	1	1	1	1	..	..	..	..	8
Discharged under observation	6	25	14	17	33	35	36	5	1	14	7	..	..	3	4	200
Discharge relieved	15	12	10	12	5	9	32	28	24	11	33	..	..	6	3	200
Cases attending 31st December, 1959 ..	40	20	25	32	34	29	29	29	37	34	30	12	13	12	17	393
Cases awaiting first interview 31st December, 1959	107	80	..	60	210	28	112	103	..	91	122	..	..	..	45	958

TABLE VIA — ADDITIONAL INFORMATION RELATING TO THE WORK OF SPEECH THERAPY CLINICS, 1959

Classification of speech defects seen during the year:— . .

Dyslalia	409
Stammering	232
Dyslalia and Stammering	68
Sigmatism	78
Cluttering	19
Vocal Disorders, including Hyperrhinophonia, Cleft Palate, etc.	44
Speech Defect due to Brain Damage	35
Speech Defect associated with Hearing Loss	38
	923

Referrals for further investigation:—

Child Guidance Clinic	46
Hearing Clinic	46
Division of Guidance, and Adjustment Department of Education	25
Psychologist, School Medical Service	35

TABLE VII — FIGURES RELATING TO WORK OF HEARING CLINIC, 1959

	Total Number	Hearing Normal	Deafness due to Remedial Conditions	Chronic Deafness	Examined in O.D. Classes	Hearing Aid recommended
New Cases—						
B.	838	293	371	83	. .	15
G.	614	207	267	58	. .	10
Total	1,452	500	638	141	. .	25
Reviews—						
B.	725	200	320	83	50	5
G.	536	157	208	64	33	3
Total	1,261	357	528	147	83	8

TABLE VIII — NUMBER OF CASES OF COMMON INFECTIOUS DISEASES IN DEPARTMENTAL SCHOOLS, 1950-1959

	Measles	German Measles	Whooping Cough	Scarlet Fever	Diphtheria	Sore Throat	Chicken Pox	Mumps	Influenza	Acute Conjunctivitis	Acute Rheumatism and chorea	Poliomyelitis	Meningococcal Meningitis
1950	21,728	2,117	803	436	203	20,335	11,919	15,193	112,495	821	999	228	39
1951	9,835	3,641	2,812	444	527	19,521	18,968	23,547	95,328	4,132	952	636	106
1952	29,578	7,143	2,772	529	154	21,016	10,974	9,319	87,390	1,318	804	449	59
1953	8,748	2,193	2,946	516	237	23,551	23,383	6,838	20,828	1,041	1,065	219	61
1954	36,080	6,345	1,210	477	144	27,482	12,577	24,480	98,665	946	1,007	190	54
1955	7,229	3,765	2,184	411	63	30,953	22,733	14,623	93,334	1,543	1,090	83	63
1956	30,202	5,547	3,132	478	34	29,790	15,513	9,052	79,595	2,119	1,095	120	47
1957	8,484	4,234	1,270	450	31	35,571	19,518	14,616	211,793	2,043	945	34	44
1958	22,389	6,059	1,036	658	29	40,016	18,090	32,207	82,632	2,849	925	35	65
1959	31,513	6,492	1,696	514	7	46,668	17,163	15,110	178,918	3,512	746	23	50
Average absence in weeks, 1959	2·50	1·89	3·99	2·99	3·00	1·07	2·27	2·18	1·03	1·07	4·80	8·55	4·91

H. Division of Dental Services

Annual Report, 1959

Director: Mr. W. B. Haymet.

Historical

Medical inspection of school children in New South Wales schools has been in operation since 1907. In 1913 the School Dental Service was inaugurated under the control of Dr. C. Savill Willis, Principal Medical Officer, Department of Education.

The Travelling School Dental Clinics, each staffed with a full-time dentist and assistant were detailed for country duty, and a clinic was also established in the metropolitan area with two part-time dentists and an assistant.

At its inception and for many years, the School Dental Service was a branch of the School Medical Service of the Education Department. In 1946 all health services were transferred to the Department of Public Health, and the following year the Division of Dental Services was created under the directorship of Dr. L. Pudney.

Establishment

The authorised establishment of the Division is: 28 Dental Officers, including the Director and Senior Supervisory Dentist; 11 Dental Assistants, including the Senior Dental Assistant; 1 Clerical Officer.

There are also 3 private practitioners visiting country institutions on a part-time basis.

Activities

There are two different fields of activity:—

(1) The provision of a limited dental service to children of N.S.W. schools by maintaining 21 Travelling School Dental Clinics for the Education Department.

(2) The provision of a complete dental service to patients of all ages in Government institutions: 12, Mental Hospitals, 3 State Hospitals and Homes, and 1 Chest Hospital of the Health Department; 9 Institutions of the Department of Prisons; 22 Establishments of the Child Welfare Department.

Exisiting Policy as in 1959

SCHOOL DENTAL SERVICE

The policy of the School Dental Service practically since its inception has been, as far as the staff position permits:—

(1) To examine school children 6-7-8 years in the metropolitan area, and to carry out treatment for those children whose parents give written permission.

(2) To examine children 6-7-8-9 years in country schools, and to carry out treatment for those children whose parents give written permission.

(3) To offer and carry out treatment to school children of all ages in remote rural areas, where parents give written permission.

(4) To carry out emergency treatment for school children of all ages, where parents give written permission.

(5) To visit schools every two years in the metropolitan area and every three years in the country, with the intention of contacting as many children as possible in their school life time.

School Dental Officers also distribute literature on dental health and deliver lecturettes to classes.

INSTITUTION DENTAL SERVICE

The policy in Government institutions is to provide a complete dental service including regular examinations, extractions, fillings, prophylaxis and the provision of dentures, including repairs, X-rays and oral surgery where necessary.

General

The Division was fortunate in maintaining a full staff for most of the year. Mr. C. S. White, Senior Supervisory Dentist, was granted 12 months' leave without pay as from 24th April, 1959, to proceed to the United Kingdom to investigate the school dental services in relation to the National Health Scheme.

The total number of fillings carried out in the School Dental Service in 1959, was again the highest in the history of the Service.

The total amount of work carried out by the Division was as follows:—

Examined	47,666
Treated	21,816
Visits	74,143
Extractions	37,517
Fillings	63,476
Dentures	1,005
Denture repairs	507
Other treatments including prophylaxis	79,542
Procedures under general anaesthesia	46

The School Dental Service

Two new mobile dental surgeries were built on 2-ton truck chasssi, and put into operation in May in country areas. These have proved most successful, and are in continuous demand.

The committee appointed by the Public Service Board to investigate the School Dental Service, completed its report in September. This was approved, and an approach has been made to the Treasury for the necessary finance to implement a new policy. A summary of the recommendations of the committee are contained in the concluding section of this report.

Children from 245 schools, being 132 metropolitan and 113 country were treated during 1959 (see appendices A and B). Clinics did not visit the undermentioned schools because of the unsatisfactory accommodation offered:—

Metropolitan—

Artarmon, Bradfield Park; Chatswood, Manly, Miranda North, Naremburn, Turramurra, Turramurra North.

Country—

Pinefield.

The undermentioned schools declined treatment:—

Metropolitan—

Nil.

Country—

Kurrajong East, Lacmalac.

The School Dental Service examined 30,617 schildren of whom 28,161 were included in a dental health survey. 92·4 per cent. of these had experienced dental caries and 77·2 per cent. were definitely in need of dental treatment at the time of examination.

The total amount of work carried out by the School Dental Service was:—

Examined	30,617
Treated	15,653
Visits	53,183
Extractions	22,873
Fillings	55,978
Other treatment including prophylaxis	67,398

As in previous years, officers of the Division examined and reported on the dental condition of aborigines at the Annual Summer Camp at La Perouse.

Posters and pamphlets were distributed regularly by Dental Officers throughout the year. Lecturettes were also given to classes in schools. Considerable use was also made of television and radio for dental health education purposes. There were 8 radio and 17 television sessions conducted by Miss E. Lion, B.D.Sc. (Melbourne), School Dental Officer.

Institution Dental Service

1959 saw a continued improvement of facilities for dental treatment in Government institutions.

CHILD WELFARE DEPARTMENT

Tamworth—The surgery was remodelled with reconditioned equipment and is now quite satisfactory for the small amount of work necessary at this establishment.

" Weroona ", Woodford; " Thornbury Lodge ", Baulkham Hills—Clinic rooms for the use of visiting dentists were provided.

Windsor—Arrangements were made for the new home for delinquent boys at Windsor to be equipped with an efficient dental surgery which will be in operation during 1960.

As previously, School Dental Officers were rostered for duty in Child Welfare Department homes during school vacations, maintaining a regular inspection and treatment programme.

The total amount of work achieved in Child Welfare Department homes was:—

Examined	2,798
Extractions	3,669
Fillings	4,952
Other treatments including prophylaxis	4,762
Dentures	277
Denture repairs	75

MENTAL HOSPITALS

The regular dental service to Mental Hospitals was maintained throughout the year.

Bloomfield—School Dental Officers were rostered for duty during school vacations to augment the part-time service. Arrangements were made during November for an additional part-time dentist to visit the hospital. A survey was made to determine the extent of dental treatment necessary.

Gladesville—The old dental room in the main block was completely remodelled. This clinic is now of a high standard.

North Ryde Psychiatric Centre—New dental equipment was received during the year. It is intended to commence a regular service early in 1960 when the surgery is completed.

Peat and Milson Islands—A departmental specialist anaesthetist commenced regular visits to this hospital towards the end of the year. Routine general anaesthetics were given in connection with dental procedures.

Broughton Hall—The dental surgery was transferred to a more suitable location.

Proposed New Hospital at Cessnock—The Government Architect's Office was advised of the requirements for the dental clinic.

The total work accomplished in Mental Hospitals was:—

Examinations	10,005
Extractions	6,928
Fillings	1,416
Other treatments including prophylaxis	4,688
Dentures	405
Repairs to dentures	282
General anaesthetics	27

STATE HOSPITALS AND HOMES

The usual regular visits by Dental Officers were made to Lidcombe and Newington during the year. New dental equipment was installed at Newington. In the event of the closure of this hospital in the future, the equipment can be beneficially transferred elsewhere.

With the increase in patients at Garrawarra, the weekly visits were recommended early in 1959.

Dental work carried out in State Hospitals and Homes was:—

Examinations	883
Extractions	760
Fillings	86
Other treatments including prophylaxis	1,018
Dentures	119
Repairs to dentures	60
General anaesthetics	15

RANDWICK CHEST HOSPITAL

The Randwick Chest Hospital was visited on the basis of one half-day per week. The work accomplished was:—

Examinations	99
Extractions	84
Fillings	70
Other treatments	233
Dentures	18
Repairs to dentures	9
General anaesthetics	2

PENAL ESTABLISHMENTS

The Dental Officers responsible for treatment of prisoners continued regular visits to Long Bay, Emu Plains, Parramatta, Cooma, Berrima, Goulburn, Bathurst, East Maitland and Grafton institutions.

Grafton—New dental equipment was installed in the dental surgery late in the year with a satisfactory result.

East Maitland—New dental equipment was received. The surgery is to be transferred to a more suitable location before installation is finalised.

Long Bay Women's Reformatory—New dental equipment was received. Some of this is being used in the old surgery until the new clinic is completed in the new hospital block.

The work accomplished in penal establishments was:—

Examinations	3,246
Extractions	3,203
Fillings	974
Other treatments including prophylaxis	1,443
Dentures	160
Repair of dentures	81

Comments

In September, the committee appointed by the Public Service Board completed its report on the expansion of the School Dental Service. Because of the inadequacy of the existing service, the following recommendations were made:—

(1) That the existing policy of the School Dental Service be altered to provide for examination of all school children of all ages as far as possible in the Sydney Metropolitan Area and the larger country centres. The parents are to be notified of the dental defects and exhorted to arrange dental attention. The opportunity of free dental treatment will be given at properly equipped fixed clinics in selected schools to school children in the age groups 6-7-8 in the metropolitan area and 6-7-8-9 in the larger country towns. This would necessitate the establishment of 15 fixed dental clinics in school grounds.

(2) That immediate treatment by means of mobile clinics be offered to country school children in areas where there are no adequate dental facilities available. The number of mobile dental surgeries would have to be increased from 2 to 16.

The implementation of (1) and (2) would necessitate an increase in establishment of 18 Dental Officers and 24 Dental Assistants.

(3) That the School Dental Service carry out as extensive a dental health programme as possible, including the fostering of child—dentist confidence.

(4) That if the recommendations of the committee as set out above are accepted, financial provision will be necessary.

The report was accepted by the Public Service Board, and an approach was made to the Treasury for the necessary finance to implement the scheme. Until such time as the above recommendations are actually in operation, only the institution dental service provided by this Division can function satisfactorily.

Appendix A—Schools Treated, 1959

COUNTRY

Albury
Albury North
Araluen
Bendemeer
Bilpin
Blaxland
Blaxland's Ridge
Bloomfield
Bodalla
Borenore
Bowenfels South
Brackendale
Brungle
Bulli
Cambridge Park
Canobolas
Carrington and Convent
Clergate
Coledale
Colo Heights
Comleroy Road
Cooerwull
Cullivel
East Lavington
Gerogery
Glenbrook and Convent
Glen Morrison
Gocup
Greg Greg
Grose Vale
Grose Wold
Hardy's Mill
Hazelbrook
Ingalba
Islington
Jindera
Kentucky
Kentucky South
Kerr's Creek
Kurmond
Kurrajong
Kurrajong North
Lavington
Lawson and Convent
Leura and Convent
Lithgow and Convent
Lucknow
March
Marrangaroo
Moruya and Convent
Mullion Creek
Mundongo
Murrumbateman
Narellan Orphanage
Narooma
Nashdale
Niangala
Nowendoc
New Lambton South
Newstead Subsidised

Appendix A—*continued*

COUNTRY—*continued*

Nerrigundah
Orange
Ohio Boy's Home
Ournie
Oxley Park
Pinnacle Road
Rocky River
Rosewood
Scarborough
Springwood and Convent
St. Marys Convent
Stanwell Park
Sunnybank School for Sub-normal Children
Tamworth
Tamworth South and Convent
Thirroul and Convent
Thurgoona
Tia
Tighe's Hill and Convent
Tilba Tilba
Tooma
Tumbarumba and Convent
Tumut and Convent
Turlinjah
Union Jack
Uralla and Convent
Urana and Convent
Walcha and Convent
Walcha Road
Watson's Creek
Wee Jasper
Wentworth Falls
Wickham
Wollum
Woolbrook
Yarrowitch
Yass and Convent

Appendix B—Schools Treated, 1959

METROPOLITAN

Arcadia
Ashbury and Convent
Ashfield and Convents (2)
Australia Street
Avalon
Bald Face
Balgowlah
Balgowlah North
Bellevue Hill
Berrilee
Bexley and Convent
Birrong
Boronia Park
Brighton-le-Sands
Burwood
Camdenville
Castle Hill and Convent
Cleveland Street
Clovelly
Como and Convent
Como West
Connell's Point
Croydon and Convent
Croydon Park
Darlington
Dobroyd Point
Double Bay
Dural
Enfield and Convent
Erskineville
Five Dock and Convent
Forest Glen
Fort Street
Galston
Glenfield Park
Glenhaven
Glenorie
Greenwich and Convent
Haberfield and Convents (2)
Hillside
Hill Top Road
Hunter's Hill
Hurstville and Convent
Hurstville South and Convent
Hurstville Seventh Day Adventists'
Hurstville Grove
Jannali
Jannali East
Kegworth
Kellyville
Kenthurst
Kyeemagh
Lane Cove and Convent
Lane Cove West
Leichhardt and Convents (3)
Loftus
Lugarno
Lilli Pilli
Manly Convent
Manly Vale
Manly West
Maroubra Junction and Convent
Matraville and Convent
Menai
Middle Dural
Milson's Point
Miranda and Convent
Mona Vale
Mowbray
Narrabeen
Newport
Newtown
Newtown North
Northbridge
North Ryde and Convent
Oatley and Convent
Oatley West
Oyster Bay
Parramatta North
Pendle Hill and Convent
Prospect
Ramsgate
Redfern
Rockdale and Convent
Rose Bay and Convent
St. Michael's Orphanage, Baulkham Hills
Seven Hills
Strathfield North
Strathfield South
Sutherland and Convent
Sutherland North
Sylvania Heights
Toongabbie
Vaucluse
Wahroonga
Wahroonga Seventh Day Adventists'
Waverley and Convent
Wentworthville and Convent
Wentworthville North
Willoughby and Convent
Woolooware
Woolwich

Comparative Statistical Return

ALL SERVICES

	1958	1959
Examined	50,499	47,666
Treated	22,210	21,816
Visits	67,767	74,143
Extractions	40,641	37,517
Fillings	50,583	63,476
Other treatments including prophylaxis	59,490	79,542
Dentures	795	1,005
Repairs to dentures	552	507
General anaesthetics	20	46

MENTAL HOSPITALS

Examined	9,208	10,005
Treated	2,500	2,359
Visits	8,634	9,031
Extractions	7,152	6,928
Fillings	1,113	1,416
Other treatments, etc.	3,975	4,688
Dentures	330	405
Repairs to dentures	334	282
General anaesthetics	6	27

STATE HOSPITALS AND HOMES CHEST HOSPITAL

Examined	693	982
Treated	487	477
Visits	1,207	1,528
Extractions	902	844
Fillings	44	156
Other treatments, etc.	575	1,251
Dentures	43	137
Repairs to dentures	38	69
General anaesthetics	14	17

H.M. GAOLS

Examined	3,461	3,246
Treated	1,723	1,376
Visits	4,164	3,851
Extractions	3,265	3,203
Fillings	1,036	974
Other treatments, etc.	1,538	1,443
Dentures	174	160
Repairs to dentures	100	81

SCHOOL DENTAL SERVICE

Examined	35,007	30,635
Treated	16,055	15,653
Visits	47,724	53,183
Extractions	26,035	22,873
Fillings	43,641	55,978
Other treatments, etc.	48,894	67,398
General anaesthetics	....	2

CHILD WELFARE DEPARTMENT

Examined	2,130	2,798
Treated	1,445	1,951
Visits	6,038	6,550
Extractions	3,287	3,669
Fillings	4,749	4,952
Other treatments, etc.	4,508	4,762
Dentures	248	277
Repairs to dentures	80	75

I. Physically Handicapped Persons

ANNUAL REPORT ON THE ACTIVITIES OF THE CONSULTATIVE COUNCIL FOR THE PHYSICALLY HANDICAPPED FOR THE YEAR 1959

Membership

Membership of the Consultative Council consists of Chairman, Director-General of Public Health, Ex-Director of School Medical Services, Chairman of the Hospitals Commission, Medical Superintendent of the Prince Henry Hospital, Orthopaedic Surgeons (3), Physicians (2), Physiotherapists (co-opted), Occupational Therapist (co-opted), and member of the staff).

The in-coming Director-General of Public Health Dr. C. J. Cummins, replaced Dr. H. G. Wallace on his retirement in November, 1959.

The Council suffered a loss during the year in the death of Dr. W. P. MacCallum, who had been appointed as a co-opted member in 1951. Dr. MacCallum, although unable to attend meetings, was always ready with helpful practical advice on problems referred to him.

The personnel of the Council otherwise remained as in 1958.

Staff

Medical Officer and Secretary; Occupational Therapist (as above); Shorthand-writer and Typist.

Functions and Responsibilities

The Council functions under the direction of the Department of Public Health and is financed by the State Government through an annual grant of an amount determined at the beginning of each financial year.

The responsibilities are:—

(*a*) To advise the Minister for Health on matters relating to poliomyelitis and problems connected with the physically disabled;

(*b*) To correlate available information in connection with notified cases of poliomyelitis in New South Wales;

(*c*) To act as a liaison between the Department of Public Health and other organisations caring for the physically handicapped; (in this respect the Council co-operates closely with the Department of Social Welfare, the Department of Social Services, the Employment Division of the Department of Labour and National Service, the New South Wales Society for Crippled Children, the Far West Children's Health Scheme, the Civilian Maimed and Limbless Association, the Multiple Sclerosis Society, and the Council of Social Services.)

(*d*) To assits the Hospitals Commission of New South Wales in advising medical practitioners as to the diagnostic and consultant services available in cases of suspected or confirmed poliomyelitis;

(*e*) To administer the grant authorised and determined annually by the New South Wales State Government. (This grant is used for the care and rehabilitation of the physically handicapped, the Council having discretion to decide which applicants should be assisted by physiotherapy or other means. The term " physically handicapped " is taken to mean " one whose activity is, or due to a progressive disease may become, so far chronically restricted by loss, defect, or deformity of bones or muscles as to reduce his/her normal capacity for education or self-support for a period longer than three months ".)

Meetings

During the year under review ten General Meetings of the Council were held. Matters pertaining to the physically handicapped were brought to notice, new applications for assistance were considered, and progress reports on patients already being helped were reviewed.

Applications for Assistance

In all, fifty-six persons were directly assisted with after-care and rehabilitation measures; others not coming under the category of eligibility for financial help were guided to appropriate statutory organisations. Except in the case of country applicants all referrals were vistied by the Medical Officer and/or the Occupational Therapist.

The types of cases assisted included patients suffering from the after-effects of poliomyelitis (21), cerebral haemorrhage (13), cerebral tumor (1), transverse myelitis (2), amputation—lower limb (3), upper limb (1), and tumor of the spinal cord (1); and from epilepsy (1), Friedreich's ataxia (1), Parkinson's disease (1), Perthés disease (1), rheumatic conditions (3), and multiple sclerosis (7).

In addition payment was made for physiotherapy for nineteen patients at the Far West Home, Manly.

Only one request for help with physiotherapy fees was received from a country town, and arrangements were made for payment to a local physiotherapist.

With the current low incidence of poliomyelitis in New South Wales there has been no recent request for a visit by a consulting orthopaedic surgeon to a country hospital. The services of diagnostic consultants in the metropolitan area have continued.

Domiciliary Rehabilitation

The domiciliary therapy introduced by the Occupational Therapist has proved very rewarding, and the results in all cases have led to happier adjustment of the entire home situation. With encouragement, and where necessary the provision of self-help devices and appliances, patients have regained confidence and increasing independence. In many cases the crafts learnt primarily from a therapeutic aspect have led to a profitable occupation.

Equipment

The Council's equipment for lending purposes has been added to and at the end of 1959 comprised a hand-sewing machine, two type-writers, two sets of French flower-making tools, a screen-printing set, a weaving loom, a velocipede, two sets of overhead bars and rings, and special kitchen devices—canisters, tin-opener, flour-sifter, etc.

The velocipede was generously donated by the Chairman, who arranged for its making by members of the staff of the Sydney Technical College.

Referrals

Eleven referrals were received from voluntary organisations, twenty-one from public hospitals, and twenty-four from private medical practitioners.

Among the difficulties encountered since the Council expanded its activities has been the ensuring that before a referred patient is discharged from hospital sufficient investigations into the home conditions have been carried out by the recommending organisation, and adequate arrangements made for continued medical supervision.

These gaps are being gradually bridged with the co-operation of those concerned as they come to realise that while the Council's function is to assist as far as possible with rehabilitation measures the actual medical care of the patient remains the responsibility of the referring body.

In the same way difficulties have arisen in the matter of supply of, or repairs to, appliances; especially when there has been a lapse of time since the acute illness of the patient's discharge from hospital, or when he or she has moved to another locality.

The difficulties, however, have been minor ones, and on the whole the widening of the Council's work has proceeded smoothly and beneficially; undoubtedly helping those who would not have been eligible for similar assistance under any other organisation.

As Departmental Medical Officer and Secretary to the Council I should like to express appreciation and gratitude to the Chairman and Members for their valuable help and advice at all times.

Statistical Appendix

	1958	1959
Notifications of poliomyelitis in New South Wales	23 (0)	27 (5)
Physically handicapped persons given domiciliary care	42	56
Expenditure therefor	£1,231 2s. 6d.	£1,388 0s. 2d.
Home visits by Occupational Therapists	682	891
Poliomyelitis patients assisted at Far West Home, Manly	35	19
Expenditure therefore	£166 8s. 0d.	£113 1s. 4d.

(In parenthesis—Fatalities)

SECTION II—MEDICAL OFFICERS OF HEALTH

REPORT OF THE METROPOLITAN MEDICAL OFFICER OF HEALTH FOR THE YEAR, 1959

I present my report on the state of the Public Health for the Sydney metropolitan Health District for the year 1959.

The District comprises thirty Municipalities, including the Cities of Sydney and Parramatta, two Shires—Hornsby and Warringah and the Harbour of Port Jackson.

It comprises 458,552 acres.

The mean population of the district is 1,914,514, an increase of 24,650 over the previous year. The density per acre is 4·17, a slight increase on the previous year (4·12).

The population of the City of Sydney decreased from 184,310 in 1958 to 182,640 this year, a difference of 1,670. The density per acre decreased from 25·74 to 25·50.

Of the thirty-two Local Government areas, in the Health District, the population increased in twenty of them, decreased in eight, and remained stationary in four.

The decreases were slight, except in the City of Sydney 1,670, Marrickville 1,400, and Leichhardt 1,000.

The largest increases were in Bankstown 5,200, Warringah 5,080, and Fairfield 3,200.

The highest density per acre was at Waverley 29·31, City of Sydney 25·50, the lowest being Liverpool and Horsnby 0·4.

Vital Statistics	1958	1959		1958	1959
Live Births	35,660	35,872	Rate per 1,000 mean population	18·87	18·71
Deaths (all ages—					
Males	9,957	10,649	Rate per 1,000 mean population		
Females	8,458	9,255			
Total	18,415	19,904		9·75	10·40
Infant Mortality	722	769	Rate per 1,000 live births	20·24	21·47
Maternal Mortality	27	22	Rate per 1,000 live births	0·76	0·61

The above figures show a slight fall in the birth rate and maternal mortality rate, and a slight rise in the death rate and infantile mortality rate, as compared with the previous year.

Causes of Death

The figures quoted below are for the Statistical Metropolitan Area which has a mean population of 2,056,170, i.e. 141,656, more than the Metropolitan Health District so the figures for the latter would be less than those quoted but the rate would be the same.

Figures in brackets are for the previous year 1958.

Diseases of the Heart 8,002 (7,168) with a rate of 3,892 (3,550) per million of mean population are the chief cause of death.

Malignant neoplasms 3,099 (3,075) with rates of 1,507 (1,523) followed and Vascular lesions of the Central Nervous System with 2,974 (2,814) and rates of 1,446 (1,393) were next.

There were 1,235 (1,108) deaths from violence with rates of 601 (549), suicide 255 (246), homicide 27 (30), accident 953 (832).

List of other causes of death with previous years where obtainable in brackets:—

			Rate per Million of Mean Population	
Pneumonia	807	(664)	392	(329)
Nephritis and Nephrosis	242	(219)	118	(108)
General Arteriosclerosis	283	(276)	138	(137)
Tuberculosis	148	(119)	72	(59)
Diabetes Mellitus	233	(217)	113	(107)
Bronchitis	280	(194)	136	(96)
Senility	159	(143)	77	(71)
Gastroenteritis and Collitis	38	(56)	18	(28)
Syphilis and its Sequelae	23	(31)	11	(15)
Alcoholism	32	(31)	16	(15)
Influenza	61	(7)	30	(3)
Arthritis	32	(37)	16	(18)
Hypertension without mention of Heart Disease	193		94	
Ulcers of Stomach and Duodenum	160		78	
Cirrhosis of Liver	123		61	
Infections of the Kidney	123		60	
			Rate per 1,000 Live Births	
Puerperal Causes	24	(27)	0·60	(0·68)

Infectious Diseases

There are now twenty-six diseases notifiable under the Public Health Act. During the year, cases occurred in nineteen of the diseases.

The following is the list of notifiable Infectious Diseases which occurred in the Health District during 1959, with the figures for 1958 in brackets:—

	Cases		Deaths
Acute Anterior Polimyelitis	16	(4)	2
Anchylostomiasis	0	(2)	0
Ascariasis	27	(3)	0
Brucellosis	1	(6)	0
Rheumatic Chorea	0	(6)	0
Diphtheria	2	(7)	0
Infectious Hepatitis	1,134	(1,289)	6
Infantile Diarrhoea	113	(82)	7
Leptospirosis	0	(0)	0
Meningococcal Infection	37	(37)	7
Ornithosis	1	(0)	0
Paratyphiod Fever	8	(7)	0
Peurperal Fever	6	(8)	0
Rheumatic Fever	19	(37)	0
Scarlet Fever	194	(305)	0
Typhoid Fever	1	(11)	0
Typhus Fever	2	(0)	0
Tuberculosis	758	(839)	145
Virus Encephalitis	9	(10)	0
Staphylococcal Mastitis	13	(2)	0
Staphylococcal Pneumonia	52	(3)	18
Staphylococcal Infection—Infants under four weeks	84	(2)	3

Environmental Sanitation

The important work of advising and supervising the work of the Local Authorities in the field of environmental sanitation is the resonsibility of this branch, and as the population of the district increases, so do the problems increase. The lag in the provision of sewerage leads to great problems in regard to nightsoil disposal.

Nightsoil depots, because of the increased building development around them, are no longer satisfactory. This problem is being got over by the provision of sewer disposal units by several Councils which are given permission by the Metropolitan Water, Sewerage and Drainage Board to dispose of their nightsoil into them.

There are now only five depots for nightsoil burial in the Health District, and one of these will be closed in January next year.

There has been, I am sure, considerable improvement during the year in the maintenance of garbage depots; many brick pits are being filled in, and low lying and swamp land is being reclaimed and used as recreation areas. This reclamation of swamp land has led to considerable diminution in mosquito breeding which is very much appreciated by nearby residents.

Some Councils show how, by the use of proper planning and adequate cover, a garbage depot can be maintained without any nuisance to nearby residents. Other Councils do not pay sufficient attention to this matter, and many complaints are received in this Branch as a consequence.

Perhaps the greatest problem which confronts many Councils in the unsewered areas is the disposal of sullage waters. This, because of the non-absorptive qualities of the soil in most of Sydney, is extremely difficult, and in many places the sullage waters are discharged into the street gutters where, if they are not kerbed and graded, stagnates in parts and leads to odour nuisance, mosquito breeding, and becomes a health hazard to nearby residents. Constant maintenance, i.e., cleaning of the gutters must be carried out to prevent this, and this is very costly to Councils.

The only solution to the problem is the provision of sewerage.

Atmospheric Pollution and the Disposal of Effluents from Industrial Plants.

Complaints are becoming more frequent in relation to atmospheric pollution, particularly with smoke and soot and various gases, the products of industry which are in many cases a danger to the health of people in the surrounding neighbourhood, and the help and advice of the Division of Occupational Health of this Department is valuable and appreciated. The introduction of the proposed Clean Air Act, it is hoped, will do a great deal towards the amelioration of the present conditions.

Disposal of effluents from factories is also a matter for supervision by the Branch, and with the introduction of new industries using new products means that constant supervision has to be exercised. All these matters are kept under constant observation, and recommendations are made to Councils when necessary.

Investigations and reports are made for other Government Departments when requested.

A great number of inquiries from doctors and members of the public are made to this Branch by telephone and interview, and these are all promptly attended to.

Health education is an important aspect of this Branch's work, and the Medical Officer of Health has given advice on matters of public health through newspapers and radio, and also during Health Week, of which Committee he is Chairman.

During the year the Medical Officer of Health served on the following Committees: Pure Food Advisory Committee, Building Advisory Committee, New South Wales Film Council, Diphtheria Immunisation Advisory Committee and others from time to time.

He also acts as tutor in environmental sanitation to students attending the course for the Diplomas in Public Health and in Tropical Medicine at Sydney University.

HUNTER RIVER HEALTH DISTRICT—ANNUAL REPORT, 1959

Staff

Following the retirement of the full-time Government Medical Officer, Newcastle, a part-time officer was appointed in his place. The only Government Medical Officer duty not carried out by the part-time officer is that of Medical Referee under the Workers' Compensation Act and the M.O.H. now sits on compensation Medical Boards.

General

Little change has taken place in the routine work during the year. There has been an increase in the number of phone and counter enquiries needing the attention of the M.O.H. with consequent lessening of time available for field work compared with former years.

During February-March, the M.O.H. acted as Chairman of the Medical Authority under the Broken Hill Compensation (Silicosis) Act for four weeks, whilst the Chairman was on recreation leave.

A mass migration of rats took place in April from the Newcastle Council's Murdering Gully garbage tip to the southern section of Newcastle.

During the night and in heavy rain many hundreds crossed the Highway separating the " Dump " from the City, about 80 being killed by passing traffic on a 200-yard section of roadway.

For several weeks these rodents were to be seen at night travelling the City's streets. The reason for this migration is obscure, but may have been induced by heavy rain and lack of fresh garbage.

Investigation of an outbreak of food poisoning following eating of bananas led to the finding that this fruit had been dipped in a strong solution of gammexane before leaving another State.

An inspection of all poultry farms in Lake Macquarie Shire was made following complaints that diseased birds were being killed and dressed for human consumption.

Forty-one hotels were served with a notice concerning the new glass washing regulations and advice given to shopkeepers in regard to the sale of pre-packaged meat.

Efforts were made to induce the Hunter Water Board to agree to the dumping of nightsoil into sewer mains and so ease the problem of its disposal and to Newcastle Council to reduce the smoke nuisance emanating from its (unauthorised) garbage dump on Water Board land at Murdering Gully, but without success in both instances.

Following the decision to decentralise the activities of the Department, a search was instituted for more extensive office accommodation and arrangements have been made to occupy portion of what was formerly the Shortland Hotel at the corner of Market and Scott Streets, Newcastle, and recently acquired by the Government Insurance Office. It is hoped that the premises will be ready for occupation late in 1960.

Helminth Survey

Ten days were spent on Worm Survey work in company with a microbiologist from the Pathological Laboratory and a check made on results of treatment of Aboriginal children for Roundworm. The mid North Coast was visited and tests made on 222 Aboriginal children from the settlements at Burnt Bridge, Greenhills, Bellbrook and Taree, results compared with 1954 figures are as follows:—

	1959 Per cent.	1954 Per cent.
Burnt Bridge	16	64
Greenhills	17·5	30·5
Bellbrook	16·6	35
Taree	15	35
Kinchela Aborigines Boy's Home	Nil cases	Nil cases

The continued 6 weekly Piperazine treatment for Ascariasis has therefore reduced incidence by roughly one half, excluding Burnt Bridge where the greatest improvement is shown (64 per cent. to 16 per cent.)

At all stations there was marked decrease in the severity of the infestation and the number of heavy infestations would not exceed 3 per cent. of those examined and are due to having missed treatment.

With the assistance of a bacteriologist from the Institute of Clinical Pathology and Medical Research and a microbiologist, 351 inmates of Watt Street Psychiatric Hospital were examined for worm infestation.

At the same time 33 children from the Aborigines settlements at Karuah and Salt Ash and 64 white children attending the mixed white and dark Karuah school, were tested. Results were as follows:—

	Whites (Ascariasis) per cent.	Aborigines (Ascariasis) per cent.
Karuah	Nil cases	5
Salt Ash	..	30
Watt Street Mental Hospital	3	..

At Watt Street, 12 inmates (3·4 per cent.) found to harbour Strongyloides stercoralis were treated daily for one week with a newly introduced drug " Telmid " (Dithiananine).

Some weeks following this medication, tests carried out by the M.O.H. showed no evidence of Strongyloides.

Three of these cases also showed infestation with Hymenolepis nana (Dwarf tapeworm) but this worm was unaffected by the Telmid treatment.

Arrangements were made for trial of this drug at Kinchela Aborigines Boys' Home and in the Aborigines ward at Kempsey District Hospital, but results are not yet to hand.

Vital Statistics—1959

Population—The population of the District at 30th June, 1959, was estimated at 305,880.

Live Births—There were 6,628 live births to mothers resident in the district, equivalent to a rate of 21·67 per 1,000 of population. Of these, 3,385 were males and 3,243 females.

Deaths—Deaths of residents numbered 3,023, equivalent to a rate of 9·88 per 1,000 of population. Of these, 1,712 were males and 1,311 females.

Infantile Mortality—Deaths under one year of age numbered 200 equivalent to a rate of 30·18 per 1,000 live births.

Of the total number of deaths of infants under one year of age, 129 or 64·50 per cent. occurred within the first week of birth, and 157 or 78·50 per cent. within the first month. The corresponding rates per 1,000 live births for the two age groups were 19·46 and 23·69 respectively.

Still Births—There were 110 still births to mothers resident in the district, equal to a rate of 0·36 per 1,000 of population, and representing 1·63 per cent. of all births (live and still).

Hunter River Health District—Live Births, Still Births, and Deaths—Each Local Government Area, 1959

Municipality or Shire	Area	Population 30th June, 1959 (Estimated)	Live Births			Deaths												Still Births		
			Total			All Ages			Under 1 Year			Under 1 Month			Under 1 Week			Total		
			M.	F.	Total	M.	F.	Total	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	Total
	(sq. Miles)																			
Municipalities—																				
Cessnock, Greater ..	756·3	38,420	375	342	717	247	174	421	11	5	16	10	4	14	9	3	12	6	5	11
Maitland	149·8	28,040	359	339	698	148	121	269	7	8	15	6	7	13	3	5	8	7	3	10
Newcastle	82·4	142,530	1,475	1,364	2,839	837	709	1,546	60	39	99	45	31	76	40	26	66	30	19	49
Singleton	1·1	4,750	64	75	139	26	41	67	2	7	9	1	6	7	..	6	6	1	..	1
Shires—																				
Lake Macquarie	289·7	80,400	962	990	1,952	394	240	634	31	21	52	23	18	41	19	12	31	16	18	34
Port Stephens	390·6	11,740	150	133	283	60	26	86	4	5	9	3	3	6	3	3	6	5	..	5
Total	1,669·9	305,880	3,385	3,243	6,628	1,712	1,311	3,023	115	85	200	88	69	157	74	55	129	65	45	110

Note—Births are classified according to the usual residence of the mother, and deaths according to the usual residence of the deceased.

SOUTH COAST HEALTH DISTRICT—ANNUAL REPORT, 1959

Staff

Dr. A. J. Geoffroy, M.B., Ch.M., D.P.H., D.T.H., Medical Officer of Health; One Senior Health Inspector; One Stenographer; One Office Assistant (temporary) from 16th November, 1959.

Staff Changes—At the repeated requests of this office throughout the year, a junior Office Assistant was appointed to the South Coast Health District for a period of four months on a temporary basis to enable the work of the office to be carried out with a minimum of delay. Owing to the increased number of septic tank applications received throughout the year, delay in forwarding such applications to the Board of Health, Sydney, was progressive. It affords great satisfaction to this office and to Local Authorities that this delay was being constantly reduced since the appointment.

Local Authorities

The South Coast Health District comprises 11 Municipalities and Shires as stated hereunder:—

Municipalities—Bowral, Camden, Campbelltown, Kiama, Shellharbour, City of Greater Wollongong.

Shires—Mittagong, Shoalhaven, Sutherland, Wingecarribee, Wollondilly.

Description

The boundaries of the South Coast Health District extend in the north along the southern shores of the Georges River, westward to the Warragamba River where it joins the Mitchell Health District. The Pacific Ocean forms the eastern border of the District from the Georges River in the north to Durras Water in the South. The western border extends from the Main Dividing Range along the boundaries of the Wollondilly, Shoalhaven Shires to Currowan Creek.

The district is watered by the Shoalhaven, Clyde, Wollondilly, Wingecarribee and Nepean rivers. Within its boundaries are the catchment area of the Sydney Water Supply with dams and reservoirs at Nepean, Avon, Cataract and Cordeaux, and Warragamba under construction.

The Coastal Range separates the narrow coastal strip of land from the Tablelands.

The chief towns are the City of Greater Wollongong, Sutherland, Nowra, Bowral, Moss Vale, Camden, Campbelltown, Mittagong, Picton and Kiama. Many tourist resotrs and places of interest are to be found within the District: The Royal National Park, Lake Illawarra, Jervis Bay, the Kangaroo Valley, Burragorang Valley and the Wombeyan Caves.

The South Coast Health District is a centre of the Dairying and Pastoral industries. The chief dairy cattle centres are in the Camden and Gerringong-Jamberoo districts, whilst the pastoral areas are mainly on the Tablelands. From Coalcliff to Dapto coal mining is an important industry. Heavy industry is carried out in the Port Kembla district, south of the City of Wollongong, and has a most important bearing on the present and future development of the South Coast District.

CHANGES IN LOCAL GOVERNMENT AREAS

The boundaries of Local Government Areas have remained unchanged during the year throughout the District.

Notifiable Diseases

There were 329 cases of infectious diseases with 7 deaths notified to this office during the year 1959, compared with 237 cases and 6 deaths during the year 1958.

Forty-nine (49) cases of Staphylococcal diseases were notified with 2 deaths from the beginning of the year 1959.

Scarlet Fever	28 cases 0 deaths 44 cases 0 deaths	compared with notified in 1958.
Poliomyelitis	1 case 1 death 3 cases 0 deaths	compared with notified in 1958.
Meningococcal Infection	3 cases 0 deaths 5 cases 0 deaths	compared with notified in 1958.
Virus Encephalitis	2 cases 0 deaths 1 case 0 deaths	compared with notified in 1958.
Infantile Diarrhoea	8 cases 3 deaths 5 cases 1 death	compared with notified in 1958.
Rheumatic Fever	4 cases 0 deaths 6 cases 0 deaths	compared with notified in 1958.
Chorea (Rheumatic)	1 case 0 deaths 0 cases 0 deaths	compared with notified in 1958.
Puerperal Fever	1 case 0 deaths 2 cases 0 deaths	compared with notified in 1958.

Brucellosis	1 case	0 deaths	compared with
	1 case	0 deaths	notified in 1958.
Infectious Hepatitis	231 cases	1 death	compared with
	166 cases	1 death	notified in 1958.
Staphylococcal Mastitis	12 cases	0 deaths	
Staphylococcal Pneumonia	8 cases	1 death	
Staphylococcal Infection (Infants under 4 weeks)..	29 cases	1 death	

There were no cases of Ancylostomiasis, Ascariasis, Diphtheria, Leptospirosis, Ornithosis, Paratyphoid Fever, Typhoid Fever, nor Typhus notified to this office during the year 1959.

INFECTIOUS HEPATITIS

There was an increase of 37·35 per cent. in the number of cases of Infectious Hepatitis notified during the year as compared with the year 1958, but the number of cases notified (231) was still well below the figures for 1957 when 400 cases of Infectious Hepatitis were notified to this office.

DIPHTHERIA

It is gratifying to report that there were no cases of Diphtheria notified in the South Coast Health District during the year 1959.

Owing to the continuation of poliomyelitis vaccinations by the Local Authorities throughout the year, difficulty is still being experienced in arranging for anti-diphtheria immunisation campaigns. However, it was impressed on all Council Officers of the great need to resume immunisation campaigns as early as possible. It is expected, therefore, that these campaigns will be undertaken by all Local Authorities in this Health District.

During the year campaigns were conducted by the City of Greater Wollongong, the Shire of Sutherland, Shire of Mittagong, Municipality of Shellharbour and the Municipality of Campbelltown.

POLIOMYELITIS

Poliomyelitis Vaccination campaigns were continued by all Local Authorities throughout the year. The response was excellent, but most Councils report a slight falling off in the number of third injections expected. This is partly accounted for by removal of families to other local government areas outside this Health District and partly by attendance of school children at secondary schools outside the area where they received earlier injections.

STAPHYLOCOCCAL DISEASES

The first cases of staphylococcal diseases notified during the year 1959 to this office were received during the last week in January. Of the 49 cases notified, there occurred 29 cases of infection in infants under 4 weeks and 12 cases of staphylococcal mastitis.

During the year, a conference was held at this office between an Officer of the Division of Maternal and Baby Welfare, the Superintendent of the Wollongong District Hospital and the Medical Officer of Health, regarding the incidence of staphylococcal infections in mothers and infants and also into infant mortality generally.

GENERAL

Except for the notification of 231 cases of Infectious Hepatitis and 49 cases of Staphylococcal diseases, only 49 cases of other infectious disease were notified during the year 1959. This is compared with 71 cases of other diseases in the preceding year, a decrease of 31 per cent. Moreover, Scarlet Fever notifications accounted for nearly 60 per cent. of these cases.

In respect of these less common infectious diseases there has been a progressive decrease from 142 cases in 1954 to 49 cases in 1959.

GASTRO-INTESTINAL DISEASES

During the year an outbreak of Gastro-Enteritis was reported at an institution conducted by the Junior Red Cross at Cronulla, Shire of Sutherland. Investigations were carried out by the Medical Officer of Health over some weeks. Pathological examination disclosed a positive infection of S. Flexneri type 6. Definite measures were taken to limit the infection spreading throughout the institution. A carrier was detected during the investigation. No further cases occurred.

TUBERCULOSIS

During the year 1959, 74 cases of Tuberculosis were notified to this office, compared with 63 for the year 1958.

The Anti-Tuberculosis Clinic located at the Wollongong District Hospital supervised by Sister Cripps of the Health Department, Sydney, continued as usual to perform valuable work.

SMALLPOX

During the year 1959, 259 certificates of smallpox vaccinations were issued by this office to persons wishing to proceed overseas and also to crew members of the various shipping companies calling at Port Kembla.

CHOLERA

173 certificates of cholera injections were issued during the year to the shipping companies on behalf of their crew members.

Medical Examinations

During the year 92 medical examinations were carried out at this office on behalf of the Public Service Board, Maritime Services Board, Department of Public Health, the Electricity Commission of New South Wales, the Main Roads Board, Department of Education, Department of Technical Education, the Ministry of Transport, and the Rural Bank of New South Wales.

Health Services in the District

(1) Public Hospitals: Wollongong District Hospital, Sutherland District Hospital, Bulli District Hospital, Illawarra Cottage Hospital (Coledale), Kiama District Hospital, Shoalhaven District Memorial (Nowra), Camden District Hospital, Berrima District Hospital (Bowral), Wingecarribee Community Hospital (Moss Vale), Carrington Convalescent (Camden), " Garrawarra " (Waterfall), David Berry Hospital (Berry).

(2) Sanatoriums for Tuberculosis: Queen Victoria Homes, Thirlmere; T.B. Settlement, Picton Lakes.

(3) Private Hospitals:—

	Type	Beds
" Strathmore ", Bowral	L.	6
" Linkside ", Bundanoon	M.	20
" Sunshine ", Camden	L.	3
" Avro ", Campbelltown	M.S.L.	7
" Cathewood ", Dapto	M.L.	4
" San Gerrard ", Engadine	L.	7
" Craftside ", Helensburgh	L.	4
" Wingecarribee ", Moss Vale	M.S.L.	15
" Roseleigh ", Woonona	M.L.	6
" St. Anthony's ", Wollongong	M.S.	6

M. Medical S. Surgical L. Lying-in.

(4) Rest Homes:—

	Type	Beds
" Vermont ", Bowral	G.	7

G. General.

(5) Ambulances:—

	Ambulances
Illawarra District Ambulance Service—	
H.Q. Wollongong	10
Bulli Branch	4
Kiama	2
St. George-Sutherland District Ambulance Service—	
Sutherland Branch	3
Helensburgh	1
Macarthur District Ambulance Service—	
Picton Branch	1
Camden Branch	1
Shoalhaven District Ambulance Service—	
H.Q. Nowra	4
Ulladulla Branch	2
Berrima District Ambulance Service—	
H.Q. Bowral	4
Total	32

Health Education

During the year 1959:—

(1) Information on health matters was given to members of the general public.

(2) Distribution of booklets amd pamphlets.

(3) Articles on health matters were supplied to the local press within the Health District.

(4) Booklets and pamphlets were also supplied to General Medical Practitioners on request for distribution to patients.

Noxious Trades Act, 1902-1944

During the year 79 inspections of Noxious Trades premises were made. Applications for licences inder the Act were received as follows:—

Fat extractors	23
Pig keepers	33
Gut scrapers	2
Poultry farmers	3
Knackers	1
Casing cleaning	1
	63

All premises were inspected and recommendations forwarded to the Board of Health.

Satisfactory conditions were found at most premises. Where conditions warranted it, traders were directed to improve their premises to a more satisfactory standard.

During the year fewer noxious trades premises were registered; the trades concerned being fat extractors and knackers.

Cattle Slaughtering

Twenty-six inspections of cattle slaughtering premises were made during the year. Appropriate advice was given to the trade for the improvement of unsatisfactory conditions.

Septic Tanks

During the year 1959, a record number of 2,439 applications for septic tank installations were received. Of these 1,521 applications were received from the Shire of Sutherland and 497 applications from the City of Greater Wollongong, a total of 2,018, being 82·74 per cent. of the total applications received at this office during the year.

2,732 proposed sites for septic tanks were inspected and there were 24 inspections of existing septic tanks.

A comparison of these figures with previous years disclosed the following:—

	Applications	Inspections made
1954	560	582
1955	614	645
1956	559	593
1957	677	756
1958	747	915
1959	2,439	2,732

It can be readily seen that during the past year the number of septic tank applications received increased by more than 300 per cent.

This was due to two factors:—

(*a*) Increased building operations commensurate with an increasing population, particularly in the Shire of Sutherland and the City of Greater Wollongong; and

(*b*) Amendment of the Local Government Act and Ordinances to include the construction of single treatment type septic tanks, practically all applications were for this amended type of tank.

This great increase in the work of this office in respect of septic tank approvals, caused a delay, progressively increasing to about two months, and was a disturbing factor to some Local Authorities and also to this office.

In an attempt to reduce this delay, application was made to the Public Service Board to increase the staff of this office.

The appointment of a junior female office assistant during the latter part of the year has alleviated the position somewhat.

Septic Closets

During the year 1959, 622 applications were received for the installation of septic closets, compared with 1,293 applications for the year 1958, approximately 52 per cent. decrease. This decrease is due to the greatly increased number of applications for the installation of single treatment type septic tanks, particularly in the Shire of Sutherland. During the year, only 156 applications for septic closets were received from Sutherland Shire, and 290 from the City of Greater Wollongong.

Sanitary Conveniences

During the year 1959, 3,061 applications were received for the installation of septic tanks and septic closets, compared with 2,040 for the year 1958, an increase of 50 per cent.

These figures emphasise the greatly increased interest of the population generally in having better sanitary conditions in their homes and surroundings. In many cases, owing to an inadequate area of land available for effluent disposal or the poorly absorbent quality of the soil, applications for septic tanks had to be recommended for refusal.

In all, 169 applications for septic tanks were recommended for refusal by the Board of Health. In some cases, however, approval for possible installation for septic closets or effluent removal services was indicated.

Sewerage

In the South Coast Health District only the towns of Bowral, Camden, Campbelltown, Mittagong, Moss Vale, Nowra, part of the City of Greater Wollongong and the Cronulla District of the Shire of Sutherland are sewered.

Extensions to the existing system are being made progressively in the Shire of Sutherland and the City of Greater Wollongong.

During the year inspections of two sewerage treatment works were made. Throughout the year reports on all district sewerage treatment works were made to this office by Department of Public Works. Where considered necessary, representations based on such reports were made to Local Authorities concerned, to remedy unsatisfactory conditions.

Nightsoil Disposal

77 inspections of nightsoil depots were made during the year. Three inspections were made of sites for proposed sanitary depots and extensions of existing depots. Throughout the year many complaints regarding inadequate or unsatisfactory sanitary services were made. As a result of investigations made, instructions were issued to Local Authorities to cause the sanitary services to be rendered in accordance with the provisions of the Local Government Ordinances. On the whole, however, rendering of nightsoil sanitary services could be considered satisfactory.

In the Shire of Sutherland, Council's Sullage Removal Service for the transport of septic tank and sullage effluent to sewerage main at Cronulla was commenced during the latter part of the year. Previously, Council had disposed of sullage effluent at the approved sanitary depot.

A similar Sullage Removal Service is in operation in the City of Greater Wollongong. This service, however, is the responsibility of the sanitary contractor.

Garbage Disposal

During the year, 63 inspections of garbage depots were made. Where necessary, the attention of the Local Authority was directed towards a more satisfactory maintenance of the depots.

Some complaints re nuisances arising from rat infestation, noxious odours, flies and smoke were received and promptly attended to. On the whole, these depots have been satisfactorily maintained.

Smoke and Fume Nuisances

Complaints of smoke and fume nuisance of industrial plants were received and investigated.

A general survey of the nuisances in the South Coast Health District is being conducted by officers of the Industrial Hygiene Branch, Health Department, Sydney.

The survey so far carried out at Port Kembla has resulted in a proposal by the Industrial Hygiene Branch to have a mass survey of the local population for the purpose of obtaining data re incidence of respiratory disease in the area.

Complaints

128 complaints of alleged nuisances were received at this office and were investigated during the year. These complaints related to unsatisfactory nightsoil and garbage services, sanitary and drainage nuisances, inadequate disposal of sullage waters on premises, smoke nuisances, water supplies and food premises.

Inspections were made of 7 insanitary buildings, 38 building and yard premises, 2 public halls, 5 public conveniences and 2 cemetery sites.

Pure Food Act

Throughout the year, Inspectors of the Pure Food Branch of the Department of Health, Sydney, visited the South Coast Health District. Numerous inspections of food premises were carried out, under the Pure Food Act, 1908, and prosecutions arising out of such inspections were conducted. Fines were imposed by the Court for breaches of the Act and Regulations.

Additional inspections were made of food premises by this office. These included cafes, baker shops and bakehouses, butcher shops, greengrocers and street traders. In all, 20 inspections were made of food premises by this office.

Water Supplies

During the year 4 town and other water supplies were investigated and 56 water samples were taken and forwarded for chemical and bacteriological examination to the Government Analyst and the Director of Pathological Laboratories. Additional samples were collected by the local authorities and forwarded for analysis and examination.

In connection therewith, appropriate advice was given to the officers of the local authorities. In some instances, joint investigations were made by officers of both this Department and the Local Authority.

Swimming Pools

Inspections were made of 6 public swimming pools and appropriate advice given to the local authority concerned. Water samples were taken for chemical analysis and pathological examination.

Tourist and Holiday Camps

A general survey of camping areas and holiday cabin areas in the district was made during the year. In all, 13 inspections were made, and conditions were found to be generally satisfactory. Recommendations were made to the local authorities concerned, which resulted in a noticeable improvement in the sanitary arrangements and water supplies in some areas.

Health Education

A large number of Health publications and pamphlets were distributed to medical practitioners and to the general public on request throughout the year. In addition, advice and information on general health matters were tendered to persons seeking such information.

General

The population of the South Coast Health District has been steadily progressing over a period of some years. As in the past, the greatest increase in population is in the City of Greater Wollongong and the Shire of Sutherland. In these areas the population has increased threefold.

This increase has resulted in extensive building operations in both the industrial and residential fields. Officers of this District have been frequently requested to give appropriate advice to the Local Authorities and their officers regarding problems of septic tank effluent disposal and the disposal of sullage wastes, and drainage generally. This has necessitated more frequent inspections and has greatly increased the work of this office.

Owing to the large increase of work required to be done in this office, it has been found necessary to request that additional officers be appointed to the office staff in order to adequately cope with the increased amount of new work and to avoid delay in transacting general business between the Department, the Local Authority and the public.

Vital Statistics, 1959

Population—The population of the district at 30th June, 1959, was estimated at 299,380.

Live Births—There were 7,783 live births to mothers resident in the district, equivalent to a rate of 26·00 per 1,000 of population. Of these 3,969 were males and 3,814 females.

Deaths—Deaths of residents numbered 2,166, equivalent to a rate of 7·23 per 1,000 of population. Of these 1,354 were males and 812 females.

Infantile Mortality—Deaths under one year of age numbered 150, equivalent to a rate of 19·27 per 1,000 live births.

Of the total number of deaths of infants under 1 year of age 94 or 62·67 per cent. occurred within one week of birth and 110 or 73·33 per cent. within the first month. The corresponding rates per 1,000 live births for the two age-groups were 12·08 and 14·13 respectively.

Still Births—There were 111 still births to mothers resident in the district equal to a rate of 0·37 per 1,000 of population and representing 1·41 per cent. of all births (live and still).

SOUTH COAST HEALTH DISTRICT—LIVE BIRTHS, STILL BIRTHS AND DEATHS—EACH LOCAL GOVERNMENT AREA—1959

Municipality or Shire	Area	Population 30th June 1959 (Estimated)	Live Births			Deaths												Still Births		
			Total			All Ages			Under 1 Year			Under 1 Month			Under 1 Week			Total		
			M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total
	(sq. miles)																			
Municipalities —																				
Bowral	11·5	5,030	41	41	82	29	18	47	3	..	3	3	..	3	3	..	3	..	..	..
Camden	79·6	5,440	64	68	132	35	21	56	..	2	2	..	1	1	..	1	1	..	..	..
Campbelltown ..	120·4	14,000	162	200	362	81	44	125	4	3	7	1	3	4	..	3	3	2	6	8
Kiama	98·9	4,920	47	45	92	35	27	62	..	..	..	..	..	..	..	..	..	2	1	3
Shellharbour	59·5	8,750	117	128	245	40	25	65	2	1	3	..	1	1	..	1	1	4	3	7
Wollongong, Greater..	275·6	118,090	1,489	1,464	2,953	570	311	881	34	31	65	26	21	47	22	20	42	25	26	51
Shires —																				
Mittagong	570·4	5,950	45	45	90	30	16	46	1	..	1	..	..	..	..	..	..	..	..	..
Shoalhaven	1,799·3	19,900	271	288	559	111	64	175	5	5	10	3	5	8	3	4	7	4	5	9
Sutherland	143·0	97,530	1,498	1,320	2,818	340	225	565	32	13	45	27	10	37	23	7	30	15	14	29
Wingecarribee ..	460·7	7,750	76	81	157	35	24	59	2	3	5	2	3	5	1	3	4	1	..	1
Wollondilly	987·6	12,020	159	134	293	48	37	85	7	2	9	3	1	4	2	1	3	3	..	3
Total	4,606·5	299,380	3,969	3,814	7,783	1,354	812	2,166	90	60	150	65	45	110	54	40	94	56	55	111

Note—Births are classified according to the usual residence of the mother, and deaths according to the usual residence of the deceased.

MITCHELL HEALTH DISTRICT—ANNUAL REPORT, 1959

Staff

Dr. E. C. Wallace, Medical Officer of Health, one Senior Inspector and one Office Assistant.

Local Authorities

The Boundaries Enquiry referred to in my report for 1958 recommended no change in existing Shire or Municipal boundaries. Local Authorities who wished to remain unchanged used, as an argument to the Court, their responsibilities in health work. Turon and Abercrombie Shires were among these. When the positions are filled, all local authorities within the Mitchell Health District will be staffed by health inspectors.

Councils have been encouraged to further extend their health work, into such fields as Welfare of the Aged, and Home Nursing Services, in conjunction with voluntary organisations. The development of this idea is very slow however, and it seems will only be achieved over a long period of time.

Relations with local authorities have been good. Health Inspectors of Councils within the District and also some outside it, have been brought together by the Medical Officer of Health twice during the year to all-day conferences. In February at Bathurst Mr. J. K. Brown, of the Microbiological Division discussed stream pollution and Mr. Mostyn of Wallace and Tiernan, treatment of water by chlorination. At Lithgow in June Mr. J. Sullivan and Mr. H. Whaite from the Industrial Hygiene Division talked to the inspectors on dust and smoke pollution and radiation hazards and Mr. McKay, founder of the Old Peoples Welfare Council in Victoria and N.S.W. spoke on community care of the aged. At each of these meetings, Council's Mayor formally welcomed the inspectors and the visitors. Reports of the meetings are sent to country newspapers throughout the district, to let the public know of the co-ordination of Health Department and local authorities in health work.

Infectious Diseases

	1959		1958	
Infectious Hepatitis	377	(inc. 1 death).	184	
Scarlet Fever	54		60	
Rheumatic Fever	9		19	(inc. 1 death).
Anterior Poliomyelitis	2		1	
Brucellosis	1		1	
Cerebro Spinal Fever	2		..	
Neonatal Staph. Infection	1		..	
Typhoid Fever	1	(died)	1	(died)
Staph. Pneumonia in infant under 4 weeks	2	(inc. 1 death).	1	
Staph. Food Poisoning	1		..	
Virus Encephalitis	1		1	
	451		268	

Comment

Infectious hepatitis heads the list of diseases notified. The number is probably only a portion of the actual cases, as doctors are not conscientious about notifying.

Stocks of gamma globulin are now kept at the big country centres in the district for convenience of local practitioners. From time to time, considerable quantities are used under special circumstances. For example, seven cases of infectious hepatitis occurred in children attending a boarding school in Bathurst. The source was traced to two primary class rooms. The other pupils in the primary school were given gamma globulin. No further cases occurred.

Figures for all other infectious diseases are relatively low, but the less common are still represented—poliomyelitis, brucellosis, typhoid, meningococcal infection, virus encephalitis. The brucellosis case was that of a slaughterman at the Blayney Abattoirs. The typhoid case was that of a woman who developed the disease in hospital while recovering from a hysterectomy operation. She subsequently died of typhoid. Staphylococcal infections are not well represented (only 2) probably due to uncertainties on the part of doctors about notification requirements. During the year Medical Officers of the Division of Maternal and Baby Welfare visited hospitals in the district to organise a staphylococcal survey. These officers talked to local doctors and emphasised the need for close observation of infants for early signs of staphylococcal infection and isolation of infected infants and mothers.

Medical Examinations

Entrants into service	9
Fitness to continue	2
Sick Leave	1
Travelling concession	1
Day nursery children	20
Sub-normal school children	15

Inspections

	1959	1958
Inspection of septic tank sites	536	273
Inspection of existing septic tanks	53	60
Inspection of noxious trade and slaughtering premises	65	101
Inspection of garbage and sanitary depots	54	91
Inspection of sewerage treatment works	27	11
Inspection of water supplies, water catchments	13	76
Collection of water samples	34	101
Inspection of hotels, cafes, food premises	172	221
Inspection of closets, yard areas, halls, dwellings, schools, hospitals, etc.	49	95
Attendances at court	2	10
Report on septic closet plans	25	80
Investigation of complaints, nuisances, etc.	59	53
Inspection of swimming pools, treatment and testing	5	..
General and miscellaneous inspections	85	44
Total	1,179	1,216

Noxious Trades

Pig keeper	32
Fat extractor	23
Bone grinder	1
Blood boiler	1
Blood dryer	1
Knacker	1
Gut scraper	1
Tanner	1
Rag dealer	1
Fellmonger	1
	63

Public Water Supplies

To help local authorities with their water supply problems, sampling schedules have been drawn up and sent to Councils, with the request that the schedules be adhered to. Thus over a period of time we will have a better knowledge of each town's water supply. In past years, sampling has been very haphazard. It has been very difficult to make Councils realise how important water supplies are to the health and welfare of their communities.

Stream Pollution

This subject has been examined pretty fully. Over past years and in the present one, a lot of physical facts have been collected on the conditions of streams throughout the district—pollution by sewerage, abattoir wastes, factory waster and so on, and the troubles brought about by these to human and animal health. Publicity was given to what was happening and reports made to those concerned. Things came to a focus when the Deputy Director General of Health initiated action to establish a committee representative of various interested authorites to consider ways and means of overcoming the problem.

Vital Statistics, 1959

Population—The population of the district at 30th June, 1959 was estimated at 138,390.

Live Births—There were 3,270 live births to mothers resident in the district, equivalent to a rate of 23·63 per 1,000 of population. Of these, 1,675 were males and 1,595 females.

Deaths—The deaths of residents numbered 1,413, equivalent to a rate of 10·21 per 1,000 of population. Of these 794 were males and 619 females.

Infantile Mortality—Deaths under 1 year of age numbered 69, equivalent to a rate of 21·10 per 1,000 live births.

Of the total number of deaths of infants under one year of age, 37 or 53·62 per cent. occurred within one week of birth and 47 or 68·12 per cent. within the first month. The corresponding rates per 1,000 live births for the two age groups were 11·31 and 14·37 respectively.

Still Births—There were 58 still births to mothers resident in the district, equal to a rate of 0·42 per 1,000 of population and representing 1·74 per cent. of all births (live and still).

Mitchell Health District—Live Births, Still Births and Deaths—Each Local Government Area—1959

Municipality or Shire	Area	Population 30th June 1959 (Estimated)	Live Births			Deaths												Still Births		
			Total			All Ages			Under 1 Year			Under 1 Month			Under 1 Week			Total		
			M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total
Municipalities —	(sq. miles)																			
Bathurst	11·3	17,060	174	181	355	85	84	169	2	3	5	1	1	2	1	1	2	2	2	4
Blue Mountains	538·6	23,870	276	273	549	169	174	343	5	11	16	4	9	13	2	7	9	7	2	9
Lithgow	8·0	14,750	170	157	327	88	57	145	2	3	5	2	2	4	2	1	3	6	1	7
Mudgee	2·6	5,460	74	67	141	33	24	57	1	1	2	1	..	1	1	..	1	1	1	2
Orange	8·1	19,250	277	263	540	104	72	176	6	3	9	5	1	6	4	1	5	6	2	8
Shires —																				
Abercrombie	898·2	2,970	31	27	58	17	17	34	..	..	..	..	..	..	..	..	..	1	1	2
Blaxland	1,331·4	8,900	112	118	230	41	27	68	4	4	8	3	1	4	2	1	3	4	4	8
Canobolas	636·2	6,160	50	46	96	32	28	60	..	..	..	..	..	..	..	..	..	..	..	..
Cudgegong	2,045·3	6,540	72	60	132	32	21	53	1	..	1	..	..	..	..	..	..	..	2	2
Lyndhurst	624·0	6,150	64	85	149	42	18	60	4	1	5	2	1	3	2	..	2	1	2	3
Molong	920·4	4,850	65	68	133	32	11	43	3	1	4	3	1	4	2	1	3	4	..	4
Oberon	1,129·0	3,600	51	48	99	13	7	20	3	..	3	3	..	3	3	..	3	..	1	1
Rylstone	1,478·0	5,110	68	51	119	26	26	52	2	2	4	1	1	2	1	1	2	2	1	3
Turon	905·1	2,830	32	41	73	23	9	32	..	1	1	..	..	..	..	..	..	..	..	..
Wellington	1,573·6	10,890	159	110	269	57	44	101	4	2	6	3	2	5	2	2	4	2	3	5
Total	12,109·8	138,390	1,675	1,595	3,270	794	619	1,413	37	32	69	28	19	47	22	15	37	36	22	58

Note—Births are classified according to the usual residence of the mother, and deaths according to the usual residence of the deceased.

RICHMOND-TWEED HEALTH DISTRICT—ANNUAL REPORT, 1959

The District

The Richmond-Tweed Health District covers an area of approximately 5,360 square miles and includes 5 Municipalities and 11 Shires.

The population at the 1954 Census was 119,574 and is at present estimated to be about 124,350.

Local Authorities

Mullumbimby Municipality, Tomki, Ulmarra and Copmanhurst Shires do not employ Health Inspectors. Tomki Shire has a working arrangement with Casino but Byron Shire could not agree to help Mullumbimby. Ulmarra and Copmanhurst are too small to justify full-time Inspectors. Lismore City Council now has three inspectors and is resisting this Department's request to employ a fourth. Their Chief Health Inspector estimates that 75 per cent. of his time is taken up with building and sewerage inspections, 50 per cent. with building.

While staffing generally is by no means overgenerous and all the Health Inspectors have extraneous duties the standard of work is high and a very good liaison is maintained with this office.

Two conferences of Health Inspectors were held during the year at one of which a tour of the Whaling Station at Byron Bay was arranged.

Notifiable Infectious Diseases

The following are the number of cases notified in the area:—

Acute Anterior Poliomyelitis	3
Ancylostomiasis	9
Ascariasis	27
Hepatitis Infectious	74
Infantile Diarrhoea	4
Leptospirosis	6
Meningococcal Infection	1
Puerperal Fever	3
Rheumatic Fever	10
Scarlet Fever	15
Tuberculosis	17
Virus Encephalitis	3
Staphylococcal Pneumonia	1
Staphylococcal diseases in infants under 4 weeks of age	6
	179

Poliomyelitis

These cases were all from the Tweed area, widely separated by date and location. Two of the infections were subsequently found to be caused by Cocksackie A type of virus and in the first case four of the members of the family were found to be excreting the same virus.

During the last four months of the year, two cases of Virus Encephalitis were notified from around the same area but no firm diagnosis was ever established. Arrangements were made for the laboratory technician to discuss with Dr. Kramer the possibility of sending specimens to Lidcombe for any case admitted to Tweed Hospital in which cerebral symptoms presented or in which there was an unexplained pyrexia.

Infectious Hepatitis

Of the 74 cases in the area 58 occurred in Tweed (43) and Byron (15) Shires, 9 of the latter being in Brunswick Heads, and the disease was first notified in Murwillumbah in January and apart from one case at Terranora remained centred there until mid-April when cases appeared at Tweed Heads and Kingscliff.

In May a case was notified from Burringbar and in June a case appeared at Dunbible followed by further cases there and at Stokers Siding. The greatest number were notified in April when there were 10 cases. The Byron Shire outbreak apart from one case notified on 31st December, 1958, did not begin until March and 6, the greatest number, were notified in October.

Leptospirosis

While only 6 cases were notified during the year, there is, according to the local Veterinary Practitioners a great reservoir of the infection in farm animals particularly in calves and pigs. It seems probable that a number of cases may not be diagnosed. Arrangements have been made so that any positive laboratory reports for this disease and Infectious Hepatitis are available to this Office, as a check on the number of notifications received.

Ascariasis and Ancylostomiasis

Virtually all these cases were from the Aboriginal Reserves and the great majority were notified from the Lismore Base Hospital where they has been sent for treatment.

Scarlet Fever

Eight of the cases were notified from the Tweed area. In September a case was notified from Boundary Creek involving the son of the Schoolmaster and the doctor closed the school. No rash was present on the boy when seen the same afternoon and swabs of the teacher and the rest of the family were negative as were swabs taken from a school in Lismore attended by the lad. The school was re-opened the next day and the patient subsequently developed a frank measles rash.

Tuberculosis in Cattle-Human Strain

At the end of September the Manager of the Experimental Farm at Wollongbar reported that human type organisms had been isolated from a prescapular gland sent to Glenfield from one of four reactors in a previously immune herd. These cattle were slaughtered at Byron Bay but material from only one beast was sent to Glenfield.

All the twenty men who during the year had any contact at all with the herd were X-rayed as were their families and any with an abnormality were examined clinically. No evidence of active Tuberculosis was found.

Five of the children who were Mantoux Negative in 1957 were found to have converted though with clear X-rays, they on the recommendation of Dr. Harris have been put on a course of Isonaizide.

An inspection was made of the farm premises but again nothing found. However mention was discovered in Thorntons Text-book of Meat Inspection of " so-called skin tuberculosis in cattle " which has caused many herd in America and Great Britain to lose or fail to reach attested standards because of " skin lesion " reactors. This was shown to the Manager as a possible explanation. A subsequent tuberculin test on the herd failed to show reactors.

Public Water Supply

Except at Grafton no systematic examination of water is done and samples are only submitted as a result of complaints which are rare since many people prefer roofwater for drinking to the reticulated supply. This is the case even in the Rocky Creek distribution area where public complaint seems to be limited to the stains left on newly washed clothes.

The Yamba supply which originates near to the toilet block of a Camping Reserve has not yet shown evidence of pollution.

It is hoped to encourage Health Inspectors to submit regular samples so that in time some knowledge of each public supply can be built up.

Environmental Sanitation

Inspection of sites for septic tanks occupies a great deal of time particularly in the Tweed District. In this area the demand for septic sewerage is growing regardless of the fact that many properties depend on spear point water supplies.

In the new development it is possible to use groundwater for sewage disposal only when there is ample storage for roof water.

A scheme for advancing money so that householders can provide themselves with septic tanks is being considered by one Council.

General

Minor flooding occurred in Lismore and Grafton areas in February but little damage was done and no danger to the Public Health arose. At the beginning of March the Director-General of Public Health and the Chief Health Inspector met the Lismore City Council on the question of additional Health Inspector.

In August the Deputy-Director-General of Health visited the area on two occasions.

A member of the Pure Food Branch visited the area several times during the year and members of the Baby Welfare Division made inspections of Maternity accommodation in connection with the Staphylococcal Survey.

In November the Medical Officer of Health assumed responsibility for the Chest Clinic at the Lismore Base Hospital.

Facilities at Camping areas have been inspected during holiday periods and standards found to be reasonably good. One Council has installed a Solar heater for the hot water supply to baths and laundries.

General inspections and investigations were as follows:—

Proposed septic tank sites	414
Existing septic tank sites	19
Septic closets	2
Nightsoil depots	10
Garbage depots	12
Sub-divisions	11
Complaints	20
Noxious trades	60
Water supplies	9
Camping areas	19
Beach reserves	3
Sewage treatment works	10
Hospitals	15
Theatres	1
Aboriginal reserves	7
Aboriginal camps	2
Showgrounds	7
Bedding and upholstery premises	4
Schools	3
Swimming pools	5
Abattoirs	1
Medical examinations	34
Saleyards	2
Hotels	5
Clubs	1
Butchers shops	9
Cafes	18
Total	703

Vital Statistics, 1959

Population—The population of the district at 30th June, 1959, was estimated at 124,350.

Live Births—There were 2,957 live births to mothers resident in the district equivalent to a rate of 23·78 per 1,000 of population. Of these 1,457 were males and 1,500 females.

Deaths—The deaths of residents numbered 1,064 equivalent to a rate of 8·56 per 1,000 population. Of these 628 were males and 436 females.

Infantile Mortality—Deaths under 1 year of age numbered 56 equivalent ot a rate of 18·94 per 1,000 live births.

Of the total number of deaths of infants under one year of age 40 or 71·43 per cent. occurred within one week of birth, and 41 or 73·21 per cent. within the first month. The corresponding rates per 1,000 live births for the two age groups were 13·53 and 13·87 respectively.

Still Births—There were 61 still births to mothers resident in the district, equal to a rate of 0·49 per 1,000 of population and representing 2·02 per cent. of all births (live and still).

RICHMOND–TWEED HEALTH DISTRICT—LIVE BIRTHS, STILL BIRTHS AND DEATHS—EACH LOCAL GOVERNMENT AREA—1959

Municipality or Shire	Area	Population 30th June 1959 (Estimated)	Live Births			Deaths												Still Births		
			Total			All Ages			Under 1 Year			Under 1 Month			Under 1 Week			Total		
			M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total
Municipalities —	(sq. miles)																			
Ballina	9·0	3,680	46	36	82	47	18	65	2	..	2	2	..	2	2	..	2	1	2	3
Casino	6·2	8,360	121	115	236	44	36	80	..	1	1	..	1	1	..	1	1	3	..	3
Grafton	31·0	15,400	179	164	343	82	65	147	4	5	9	3	3	6	3	3	6	2	1	3
Lismore	17·5	19,230	201	223	424	88	67	155	4	2	6	4	2	6	3	2	5	10	3	13
Mullumbimby ..	1·7	2,100	30	24	54	13	13	26	..	1	1	..	1	1	..	1	1	..	1	1
Shires —																				
Byron	215·0	8,780	83	88	171	34	25	59	1	1	2	1	..	1	1	..	1	..	1	1
Copmanhurst	1209·2	2,500	37	25	62	16	11	27	1	1	2	..	1	1	..	1	1	1	1	2
Gundurimba	175·4	3,110	47	46	93	14	10	24	2	1	3	..	1	1	..	1	1	..	..	..
Kyogle	1,342·0	11,270	164	144	308	58	45	103	3	4	7	3	3	6	3	3	6	3	2	5
Maclean	402·3	6,170	62	65	127	33	29	62	3	..	3	2	..	2	2	..	2	3	1	4
Terania	340·0	6,500	72	88	160	29	10	39	3	..	3	3	..	3	3	..	3	3	3	6
Tintenbar	179·0	4,650	36	49	85	21	15	36	1	1	2	1	1	2	1	1	2	1	..	1
Tomki	437·7	3,300	22	43	65	11	3	14	1	..	1	1	..	1	1	..	1	2	..	2
Tweed	503·2	21,840	287	317	604	94	61	155	4	4	8	4	3	7	4	3	7	5	6	11
Ulmarra	686·3	3,290	31	34	65	16	9	25	1	..	1	..	..	..	..	..	..	2	..	2
Woodburn	541·0	4,170	39	39	78	28	19	47	2	3	5	..	1	1	..	1	1	2	2	4
Total	6,096·5	124,350	1,457	1,500	2,957	628	436	1,064	32	24	56	24	17	41	23	17	40	38	23	61

Note:—Births are classified according to the usual residence of the mother, and deaths according to the usual residence of the deceased.

BROKEN HILL AND DISTRICT—ANNUAL REPORT, 1959

REPORT OF MEDICAL OFFICER OF HEALTH—J. T. CULLEN, M.B., B.S.—FOR THE YEAR ENDED 31ST DECEMBER, 1959

The population of the Broken Hill Municipal District at 31st December, 1959 was estimated at 32, 275.

The deaths for the period under review numbered 263. There were 886 births.

Infectious Diseases

The monthly incidence of notifiable diseases was as follows:—

Month	Infectious Hepatitis	Gastro Enteritis	Meningococcal Septicaemia
January	1	..	..
February	..	..	..
March	..	..	..
April	..	..	..
May	1	..	..
June	..	..	..
July	3	..	..
August	..	..	..
September	5	..	..
October	13	..	..
November	12	..	..
December	4	..	..
Totals	39	..	..

Other Diseases notified were:—

Month	Rheumatic Fever	Staphylococcal Dermatitis	Virus Encephalitis
October	2	..	..
November	..	1	..
December	..	..	1

The incidence of notifiable diseases at Broken Hill during the past five years is shown in the following table:—

Disease	1955	1956	1957	1958	1959
Typhoid and Paratyphoid	..	..	..	..	..
Scarlet Fever	..	..	..	..	..
Diphtheria	3	3	1	..	..
Meningococcal Meningitis	2	..	..	..	..
Poliomyelitis	..	3	..	..	..
Infectious Hepatitis	52	2	2	19	38
Bacillary Dysentery	..	4	1	..	..
Influenzal Meningitis	1	..	..	..	..
Infantile Diarrhoea	1	1	..	..	..
Staphylococcal Pneumonia	..	..	1	..	..
Staphylococcal Septicaemia	..	..	1	..	..
Meningococcal Septicaemia	..	..	..	1	..
Gastro-enteritis	..	..	..	1	..

Infectious Hepatitis remains as the major notifiable disease. No case of poliomyelitis has been notified since the mass inoculation by Salk vaccine.

Miscellaneous Matters

Particulars	1959
Examinations and interviews as M. O. H.	70
Post Mortem Examinations at the request of the Coroner	31
Attendances at Court and giving evidence in Police cases	45
Examinations of arrested persons or prisoners	25
Visits to Goal for examination of prisoners	20
Examinations and reports on Police Constables re fitness for duty	22
Governmental Examinations (Public Service Board, Railway Department, Education Department, etc.)	104
Examination of new patients at Anti-Tuberculosis Clinic	60
Total number of attendances at Anti-Tuberculosis Clinic	251

SECTION III—STATE HOSPITALS AND HOMES

LIDCOMBE STATE HOSPITAL AND HOME—ANNUAL REPORT, 1959

Honorary Visiting Staff:—

Honorary Consulting Chest Physicians: W. G. Tellesson, M.B., B.S., M.R.C.P., of Randwick Chest Hospital, acting in this capacity at Lidcombe State Hospital.

Honorary Surgeons: A. O. Parker, M.B., B.S., F.R.C.S.; W. G. Taylor, M.B., F.R.C.S. (Eng.); F. W. Ross, M.B., B.S.

Honorary Consulting Urological Surgeon: H. G. Cummine, M.D., M.S.

Honorary Ophthalmic Surgeons: Eunice Wilson, M.B., B.S., M.Sc., D.C.M.S.; J. H. Findlater, M.B., B.S.

Honorary Dermatologists: E. Kocsard, Sec. 17 (1) (c) of Medical Practitioners' Act; J. L. Coles, M.B., B.S., O.I.H.

Honorary Orthopaedic Surgeons: C. C. McKellar, M.B., Ch.M., F.R.C.S. (Ed.), F.R.A.C.S. (Orth.); 2nd position—vacant.

Hon. Ear, Nose and Throat Surgeons: R. E. Dunn, M.B., B.S., B.Sc.; G. Varo, Sec. 17 (1) (c) of Medical Practitioners' Act.

Honorary Anaesthetist: Vacant.

Honorary Neurosurgeon: G. K. Vanderfield, M.B., B.S.

Hon. Clinic Neurologists: L. S. Basser, M.B., B.S., M.R.C.P., M.R.A.C.P.; J. L. Allsop, M.B., B.S., M.R.A.C.P.

Honorary Psychiatrist: Vacant.

Radiologist: Colin R. Cole, M.B., Ch.M.

Dentist: D. Bracken, B.D.S.

Staff—Administrative:—

Medical Superintendent: G. S. Procopis, M.B., M.R.A.C.P.

Deputy Medical Superintendent: G. C. Hughes, M.B., B.S.

Senior Medical Officers: R. B. Holland, M.B., B.S., F.F.A.R.A.C.S.; B. E. Sharkey, M.B., B.S.; W. R. Hobart, M.B., B.S., M.R.A.C.P. (receiving Senior Medical Officer's rate of salary but occupying position of Medical Officer).

Psychiatrist: B. Stephen, M.B., Ch.B., D.P.M.

Medical Officers: F. Ofner (Section 17 (1) (c) of Medical Practitioners Act); A. Manheim, (Section 17 (1) (c) of Medical Practitioners Act); G. R. Gould, M.B., B.S.; T. O'Connell, M.B., B.S.; G. E. Kellerman, M.B., B.S.; N.F.R. Fink, M.B., B.S.

Manager: E. C. Barrett, J.P.

Assistant Manager: S. A. Bingham.

Matron: Miss L. V. Lumme.

Nurses: 78.

Other Female Staff: 23.

Attendants: 239.

Other Male Staff: 124.

No. of beds available as at 31st December, 1959: Hospital 880; Home 862; Total 1,742.

Daily average number of patients and inmates resident:—

1950	1173	1955	1297
1951	1162	1956	1347
1952	1160	1957	1374
1953	1171	1958	1475
1954	1216	1959	1484

Admissions, Discharges and Deaths:—

	Hospital Section	Home Section	Total
In Institution 1st January, 1959	773	705	1,478
Admissions	1,194	1,981	3,175
Transfers	596	556	1,152
Total treated	2,563	3,242	5,805
Discharges	652	1,921	2,573
Deaths	618	20	638
Transfers	556	596	1,152
In Institution 31st December, 1959	737	705	1,442

Daily Average: 1484

Casual relief—43 indigent persons were provided with sleeping accommodation for one (1) night and were supplied with a meal.

X-ray—5,058 cases were examined in the X-ray Department, including examination of staff as prescribed by the award made by Judge Kinsela.

Operations—288 major (abdominal and bone) operations, and 49 eye operations were performed.

Electro-cardiograms—676 electro-cardiograms were taken and reported on.

Laundry—1,676,181 articles were laundered.

Farm—Sales amounted to £1,986 4s. 9d.

The following works were carried out under the direction of the Public Works Department:—

(1) The Institute of Clinical Pathology was completed and was officially opened on 12th December, 1959.

(2) The new Main Kitchen and Dining Halls were opened on 1st September, 1959.

(3) The guinea pig hutments have been completed, with the exception of additional lighting and fencing. Fencing of this area and the adjacent farming area is at present under special consideration.

(4) A new Ironer and Folding Machine has been installed in the laundry.

(5) Erection of three (3) new cottages was commenced and they should be completed by late February or early March, 1960. Two (2) other new cottages for Medical Officers were occupied during 1959.

(6) Superficial X-ray equipment for dermatological purposes was installed.

(7) Renovations to the Main Office were commenced.

(8) Purchase and installation of Physiotherapy equipment in Ward 12.

Major repairs and renovations were continued by the Building Construction and Maintenance Branch of the Public Works Department in wards, residences and some allied services.

General maintenance was carried out by hospital artisans and outdoor staff under the direction of the Manager. Beautification of areas surrounding Wards 25, 26, 27, 28 and 29 is hampered by the lack of grass-cutting equipment previously referred to for 1958.

Additional posts of Psychiatrist, Clerk in Main Office, Assistant Medical Secretary, and Secretary to the Almoner, were created. Dr. B. Stephen was appointed to the position of Psychiatrist and commenced duty on 4th January, 1960. The position of Clerk, Main Office, was filled by the transfer of Mr. B. Shepley from Head Office to the position of Maintenance Clerk and the retention and re-arrangement of the existing clerical officers. The Assistant Medical Secretary and Secretary to the Almoner had not been filled.

Dr. Sharkey has been temporarily attached to the Royal North Shore Hospital to further his studies in Anaesthesia.

Mr. S. A. Bingham, Assistant Manager, is undergoing a course of Hospital Administration at the University of New South Wales, which commenced on 7th September, 1959. The position of Assistant Manager has been occupied by Mr. A. E. Marsh.

Four additional kitchenmen, one cook and one butcher positions were created for the new kitchen. The kitchenmen were appointed as soon as the authority was received, and one cook—supernumerary—was absorbed into the staff. The appointment of a butcher was made early in 1960.

Ministerial approval has been given to the creation of an Alcoholic Rehabilitation Ward, and Dormitory No. 35 has been set aside for this purpose. The Secretary of the Foundation desired certain structural changes before occupation. These will be undertaken following a conference with the Secretary of the Foundation, Public Health and Public Works officers, and the Executive Staff of this hospital.

STRICKLAND CONVALESCENT HOSPITAL, VAUCLUSE—ANNUAL REPORT, 1959

Staff—Matron 1, Visiting Emergency Medical Officer 1, Clerical Officer 1, Trained Nurses 4, Assistant Nurses 3, Female Domestic Staff 7, Day Attendants 2, Night Attendant 1.

Patients are admitted for convalescence from all Metropolitan Hospitals, and on doctors' recommendations through the Board of Health Admission Depot, 93 Macquarie Street, and occasionally from other districts, Newcastle, Broken Hill, Canberra, &c.

The normal period of convalescence is three weeks, extensions are given when recommended by doctors in cases of Deep X-ray, fractures, &c.

Normal routine nursing was carried out during the year for the care and rehabilitation of convalescent patients.

An increasing number of patients suffering from cancer are admitted for convalescence at Strickland whilst receiving deep-ray treatment at Sydney and St. Vincent's Hospitals.

This is probably the last annual report from Strickland as it is now constituted; it will be combined with Newington during 1960.

STATISTICAL APPENDIX CONTAINING DETAILED TABLES OF COMPARATIVE POPULATION, ETC.

	1958			1959		
	Patients	Inmate Workers	Total	Patients	Inmate Workers	Total
Admitted	806	22	828	762	56	818
Discharged	809	22	831	749	56	805
Daily average	44·8	20·7	65·5	43	19·8	62·8
No. of Bed Days	16,349	7,553	23,902	15,716	7,224	22,940

Daily Average Population:—

	1958	1959
Patients	44.8	43
Inmate Workers	20.7	19.8
Staff Female	15	15
Staff Male	4	4
Total	84.5	81.8

NEWINGTON STATE HOSPITAL

Honorary Medical Staff—

Neurologist: vacant.

Ophthalmic Surgeon: vacant.

Authorised Staff—

Medical Superintendent, J. McManamey, M.B., B.S., Syd.; one Deputy Medical Superintendent; one Medical Officer; one Manager; one Matron; Nurses 70; Dispenser 1; Senior Clerk 1; Male Clerk 1; Female Office Assistants 2; Storekeeper 1; Female Office Assistant in Store 1.

Dentist visits the Institution fortnightly.

Male Staff 34; other Female Staff 24.

Admissions and Discharges —

Inmates in Institution, 1st January, 1959	384	
Admissions during year..	512	
		896
Discharges during year	448	
Deaths during year	49	
		497
Remaining in Institution at 31st December, 1959		399
Average Daily Number Resident		400·5

Hospital Division Statistics —

Beds available	284*
In hospital at 1st January, 1959	218
Admissions during year	90
Discharges during year	40
Deaths during year	47
Remaining in Hospital at 31st December, 1959	221

* Does not include closed Wards " D " 10 beds and " E " 27 beds, which have been condemned by the Director General of Public Health as unfit for occupation.

Ward " F " which in past years provided accommodation for 35 beds, is now carrying 23 beds and Ward " C " which previously provided accommodation for 25 beds is now carrying 16 beds.

RANDWICK CHEST HOSPITAL

The following are the Statistics summarizing activities of this Hospital during the twelve months ending 31st December, 1959:—

Indoor Patients

	Male	Female	Total
Patients under treatment on 31st December, 1958	147	41	188
Admitted during 1959	150	63	213
	297	104	401

	Male	Female	Total			
Died during 1959	40	5	45			
Discharged during 1959	140	67	207			
Total died and discharged 1959				180	72	252
Remaining in Hospital on 31st December, 1959				117	32	149

Daily average number of resident patients	158
Average residence of discharged patients in days	170
Number of individuals who received outdoor treatment	1,030
Total number of visits by outpatients	1,954

Inmate Workers

In the institution on 31st December, 1958	12
Admitted during 1959	5
	17
Discharged during the year 1959	7
Remaining in the institution on 31st December, 1959	10
General daily average number including workers	168

Autopsies

There were 45 deaths during the year and 28 autopsies were performed.

X-ray Department

X-ray examinations	3,696
Barium meal examinations	70
Screenings	75
Films used	5,858
Dental films used	81
Tomograms	176

Pathological Laboratory

Specimens submitted for examination	6,265

Operations Performed

Thoracic —	
Pneumonectomy	2
Lobectomy	15
Segmental Wedge and Cone	9
Thoracotomy	1
Thoracoplasty	7
Decortication	5
Secondary Suture	6
Tracheotomy	0
Bronchoscopy	32
Bronchial biopsy	10
Bronchogram	38
Insertion of intercostal tube (in theatre)	28
Thoracoscopy	4
Drainage of empyema	1
Aspiration (including post pneumonectomy)	42
Artificial pneumoperitoneum	14
Major General	15
Minor General	17
Major Orthopaedic	5
Major Urological	3
Minor Urological	12
Ophthalmological	3
Oto-Rhino-Laryngeal	8
Neurological	1
Blood Transfusions (204 bottles of blood)	77
Electro-convulsive therapy Treatments	3

Surgical Ward

Admissions —	Male	Female	Total
Thoracic	26	4	30
General	11	14	25
Total	37	18	55

Average Duration of Stay: Thoracic, 21 days; General, 14 days.

The undermentioned schedule illustrates the fluctuation in the number of patients in residence since the year 1942.

Daily Average Number of Patients —

1942	200·2
1943	194
1944	185
1945	152·69
1946	107
1947	115
1948	140
1949	152
1950	154
1951	154
1952	178
1953	242
1954	287
1955	260
1956	240
1957	202
1958	204
1959	178

Standard Establishment

Visiting Specialist Staff —

Ear, Nose and Throat Surgeon	1
Urologist	1
Thoracic Surgeons	2
Dermatologist	1
Orthopaedic Surgeon	1
General Surgeons	2
Physician	1
Radiologist	1
Ophthalmologist	1
Refractionist	1
Anaesthetists	3
Consultative Panel	3
Psychiatrist	1
Neuro Surgeon	1
	20

Medical and Clerical —

Medical Superintendent	1
Deputy Medical Superintendent	1
Surgical Registrar	1
Medical Officers	5
Secretary	1
Clerk, Male	1
Office Assistants	2
Shorthand-typiste	1
	13

Nursing —

Matron	1
Sub-Matron	1
Home Sister	1
Sisters, Theatre and Nurses (female)	104
Attendants (male)	25
	132

Domestic Staff —

Wardsmaids and Housemaids	50
Kitchenmaids	3
Kitchenmaid — Cook	1
Cooks	6
Seamstress	1
Head Waitress	1
Cleaner (female)	1
Kitchenmen	3
	66

Miscellaneous —

Outdoor Supervisor	1
Male Cleaners	8
Maintenance of grounds, etc., including Flower Gardener	6
Firemen	3
Engineer	1
Handy-man/Carpenter	1
Painter	1
Store	2
Occupational Therapists	2
Physiotherapists	2
Radiographer	1
Radiographer in Training	1
Dispenser	1
Dispensary Assistant	1
Catering Officer	1
Almoner	1
	33
Visiting Clergymen	2
Librarian — employed part-time by R. C. H. Ladies Auxiliary	1
Total	267

Staff Shortages

Nursing	23
Domestics	7
Miscellaneous	3
Medical Officer	1

General

1. Inpatients—Owing to the decision in October, 1958, to reduce bed capacity to 150 patients, there has been some reduction in admissions during 1959. The Hospital has had no difficulty in maintaining the establishment at this level; in fact patients who had hoped for admission to the institution have had to be diverted to other thoracic units. This decision to reduce the number of beds is unfortunate as there has been no dramatic decline in the incidence of tuberculosis, and cases primarily diagnosed with advanced disease, especially in middle-aged to elderly males, are still being admitted.

2. Outpatients—There has been an augmentation of out-patient attendances owing to the preference of discharged patients to return for follow-up, and to the increasing awareness by local practitioners of the facilities offered by the Hospital with regard to the diagnosis and advice on treatment of thoracic cases.

3. Nursing Examinations—The Departmental examination in General Nursing and that for the twelve months Post-graduate Course in Tuberculosis and other Chest Diseases were held. All candidates were successful.

4. North Ryde Psychiatric Centre—Since mid 1959 regular weekly visits by members of our medical staff have been made to this hospital and assistance offered in organizing a control programme for cases of tuberculosis in the Mental Hospitals. An excellent liaison has been affected, and, where necessary, cases have been transferred to the Randwick Chest Hospital for investigation and surgical procedures.

5. Lidcombe State Hospital—Visits have been made as requested to this Hospital by our medical personnel to assess thoracic cases. When necessary, transfer has been arranged to Randwick for investigation and treatment, medical or surgical. Our surgical registrar also attends Lidcombe when required in his capacity as general surgeon.

6. Centenary Celebrations of the Municipality of Randwick—With the permission of the Department and under the auspices of the Mayor of Randwick, the Hospital held an Open Day on 6th March, 1959, when various aspects of the functions of the Hospital were demonstrated. An attractive brochure was provided by courtesy of the Government Printing Office.

7. X-Ray Department—Two rooms are now utilised for major equipment, one containing the Barazzetti tomogram, which was installed in 1958, the other the new Philips DLX Standard X-Ray, installed in January, 1959, to replace the Watson Victor KX. 500 which was transferred to the Sydney University. Installation was commenced during the year on a water-temperature control unit and some new dark-room equipment has been received.

8. Microbiological Laboratory—With the transfer of our two microbiologists to the Institute of Pathology, Lidcombe, and their replacement to date by only one, the work of this branch has had to be severely, even dangerously, curtailed. Services previously fully occupying two officers cannot hope to be encompassed by one and it is feared that ommission of many necessary investigations may result in faulty diagnosis or incorrect treatment. The acquisition of such new equipment as the flame photometer, electrophoresis apparatus, Ph meter and spirometer make it even more imperative that our laboratory staff should be restored to its full complement.

9. The Randwick Chest Hospital Staff Social Club—This club has held popular concerts, cabarets and competitions which have brought all members of the Staff together. These have enabled donations to be made to the Patients' Club, the Randwick Chest Hospital Ladies Auxiliary and the Prince of Wales Cancer Appeal. A Christmas barbecue, where children of members of the staff received presents, was well attended.

10. The Randwick Chest Hospital Patients' Club—This club held successful competitions in billiards, snooker, euchre, indoor bowls and housie-housie which provided entertainment for the patients and have been a means of raising funds for extra amenities.

11. The Randwick Chest Hospital Branch of the Citizens T.B. League, was formed in March, 1959, and during the year 15 up-graded patients were occupied in the manufacture of waste-paper baskets, magazine tidies etc., of excellent quality. Some of these patients have returned to their original occupation and others are being trained for new employment.

GARRAWARRA HOSPITAL, WATERFALL—ANNUAL REPORT FOR YEAR ENDED 31st DECEMBER, 1959

This hospital is the former Waterfall Sanatorium, and treats chronic diseases in the middle aged. The patients are admitted through the Hospital Admission Depot. Patients occasionally come from other hospitals (public and private), but most come from their own homes. On admission they are often extremely sick, suffering from chronic ailments and malnutrition. The age groups are given in the statistical table.

The laboratory work of the hospital is carried out at Lidcombe, while the out-patients departments of St. George and Sutherland Hospitals are used when specialist examinations and orthopaedic work is desired.

It has not been possible to recruit a Physiotherapist or an Occupational Therapist during 1959, despite repeated efforts of advertising in the local press.

(*a*) Number of beds available—	as at 31st December, 1958	as at 31st December, 1959
Male Patients	35	64
Female Patients	52	52
Male Workers	95	89

	Male Patients	Female Patients	Male Workers
(*b*) Remaining in Hospital, 31st December, 1958	33	51	77
Admitted during 1959	110	25	263
Total treated during 1959	143	76	340
Discharged during 1959	58	15	263
Died during 1959	27	9	..
Remaining in Hospital, 31st December, 1959	58	52	77
Average daily number resident	47·9	51·5	75·3

Table showing the age distribution of the patients—Numbers and percentages—in residence at Garrawarra Hospital on 31st December, 1959:—

		per cent.	per cent.	per cent.
Under 40 years	1	0·909	0·909	0·909
40 to 45 years	3	2·727	2·727	2·727
46 to 50 years	1	0·909	0·909	0·909
			4·545	
51 to 55 years	5	4·545	4·545	4·545
56 to 60 years	7	6·363	6·363	6·363
			10·908	15·453
61 to 65 years	11	10·000	10·000	
66 to 70 years	13	11·818	11·818	
71 to 75 years	20	18·181	18·181	18·181
76 to 80 years	24	21·818	21·818	21·818
81 to 85 years	11	10·000	10·000	10·000
			71·817	49·999
86 to 90 years	7	6·363	6·363	
91 to 95 years	4	3·636	3·636	
Unknown	3	2·727	2·727	
		99·996	12·726	

DAVID BERRY HOSPITAL—ANNUAL REPORT, 1959

David Berry Hospital functions as a general Hospital for all persons and a Maternity Hospital for Aboriginals in the Shoalhaven District. It is conducted by the Department of Public Health in accordance with the David Berry Hospital Act of 1907.

During 1959 there was an increase in the number of in-patients, operations, X-rays and deaths as compared with 1958, while there was a decrease in the number of out-patients and births.

Comparative figures for the two years are as follows:—

	1958	1959
Number of in-patients	448	496
Number of out-patients	268	218
Average daily number of residents	12·28	15·08
Births	30	22
Deaths	17	18
Operations	133	209
Number of persons X-rayed	632	640
Films used	716	702

LEPER LAZARET — REPORT ON LEPROSY IN NEW SOUTH WALES FOR THE YEAR ENDED 31st DECEMBER, 1959

On the 1st January, 1959 seven (7) persons remained under detention at the Lazaret.

No deaths occurred during 1959.

The total number of persons admitted since 1883, when patients were first received (though the notification of leprosy was first made compulsory and the detention of lepers provided for by law only towards the end of 1900), is 239. Distributed under nationalities, the following table shows movements of patients during the year:—

	Admitted	Re-admitted	Discharged	Repatriated	Died	Remaining in at 31st December, 1959
Whites of European descent—						
New South Wales ..	1	..	..	..	..	3
Malta	..	..	..	..	..	3
Cyprus	1	..	..	..	..	1
Coloured patients—						
New South Wales ..	..	..	2	..	..	..
Totals	2	..	2	..	..	7

In Lazaret on 1st January (3 males, 4 females)	7
Admitted during the year	2
Died during the year	..
Discharged	2
Repatriated	..
Readmitted	..
Remaining in Lazaret on 31st December (4 males, 3 females)	7

Every opportunity has been offered to members of the medical profession to visit the Lazaret for the purpose of seeing such patients as were formerly under their care, or for the study of the disease.

The following statements show the expenditure for the year, and the sources from which it has been defrayed.

Statement showing the Working expenses of the Lazarets (for men and for women) at Little Bay for the year 1959:—

	£	s.	d.
Salaries	6,954	6	9
Provisions	1,941	2	0
Tobacco, comforts and amusement	284	14	7
Clothing, etc.	346	7	5
Fuel and light	524	3	4
Drugs, dressings, etc.	79	13	10
Miscellaneous	1,112	10	3
	£11,242	18	2

Deduct amounts received in respect of maintenance including contributions by the Commonwealth under the Hospital Benefits agreement £2,384 17s. 0d. nett cost £8,858 1s. 2d. Average number of patients resident, 6.1, being equal to an average of £1,843 2s. 0d. per inmate per annum in 1959.

The construction of a new Lazaret is planned, and a site has been selected.

STATISTICAL SUMMARY

TABLE I—SUMMARY OF EXPENDITURE—RANDWICK CHEST HOSPITAL, STRICKLAND CONVALESCENT HOSPITAL, GARRAWARRA HOSPITAL, STATE HOSPITALS AND HOMES LIDCOMBE, LIVERPOOL AND NEWINGTON AND DAVID BERRY HOSPITAL FOR THE TWELVE MONTHS ENDED 30th JUNE, 1959

Head of Expenditure	Randwick	Strickland	Garrawarra	Lidcombe	* Liverpool	Newington	David Berry	Total
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries and Payments in the Nature of Salaries	181,776 16 4	14,523 10 2	90,744 3 11	395,461 10 6	44,814 13 8	105,717 2 1	20,581 1 3	853,618 17 11
Provisions	33,042 17 4	8,722 19 3	21,308 4 0	114,040 2 1	7,900 19 11	33,497 18 0	2,981 12 7	221,494 13 2
Drugs, surgical appliances, dressings, etc.	14,221 4 1	35 18 6	712 8 3	19,627 16 2	2,632 18 11	3,539 17 4	1,013 12 5	41,783 15 8
Fuel, electricity and water	7,540 7 2	2,241 13 10	7,852 7 3	27,125 0 3	2,498 5 11	7,895 6 5	934 10 11	56,087 11 9
Domestic utilities, including laundry expenses, household lines, clothing, furniture, etc.	4,949 15 6	1,033 10 5	5,703 16 2	49,598 14 6	1,198 13 2	9,055 17 2	......	71,540 6 11
General establishment	11,395 3 10	1,500 18 9	7,662 16 6	25,859 5 4	4,306 15 11	6,359 5 3	2,100 16 11	59,185 2 6
Renewals and renovations to buildings and plant	8,113 14 1	1,962 13 4	5,535 10 11	28,841 7 7	1,404 18 8	56,583 8 6	478 5 9	102,919 18 10
Gross Maintenance Expenditure—	261,039 18 4	30,021 4 3	139,519 7 0	660,553 16 5	64,757 6 2	222,648 14 9	28,089 19 10	1,406,630 6 9
Collections for Sales, maintenance and payments by Commonwealth Government	2,531 19 7	11,878 0 2	23,967 19 7	176,157 19 0	16,920 16 2	59,182 1 1	10,699 19 2	301,338 14 9
Net Maintenance Cost to State	258,507 18 9	18,143 4 1	115,551 7 5	484,395 17 5	47,836 10 0	163,466 13 8	17,390 0 8	1,105,291 12 0
Average Daily population—	188	64	152	1,501	*122	403	14	2,444
Average annual cost per patient on gross maintenance expenditure	1,388 10 2	469 1 8	917 17 10	440 1 6	530 15 11	552 9 7	2,006 8 7	575 10 11
Average weekly cost per patient on net maintenance cost to State	26 7 5	5 8 9	14 11 7	6 3 10	7 10 0	7 15 7	23 16 5	8 13 6
Average annual cost per patient on net maintenance cost to State	1,375 0 10	283 9 9	760 4 2	322 14 4	392 2 1	405 12 6	1,242 2 11	452 4 11
Average weekly cost per patient on gross maintenance cost	26 12 7	8 19 11	17 12 1	8 8 10	10 3 7	10 11 11	38 9 7	11 0 9
Capital expenditure not included in maintenance	15,813 14 3	298 10 0	381 4 2	183,128 2 0	......	13,486 17 7	......	213,108 8 0

* The Liverpool State Hospital was closed during the year and patients were transferred to Lidcombe State Hospital and Garrawarra Hospital

SECTION IV—PATHOLOGICAL LABORATORIES

ANNUAL REPORT OF THE DIRECTOR OF PATHOLOGICAL LABORATORIES FOR 1959

This Division of the Department of Public Health, with headquarters at 93 Macquarie Street, Sydney, is concerned in the main with the general pathology and microbiology of human disease—its prevention, diagnosis and control.

Methods and Range of Activities

Broadly the Laboratory aims to provide:—

(*a*) A full diagnostic pathology service for indigent persons and for public and psychiatric hospitals and other institutions throughout the State. This it does by the Examination of specimens submitted directly, and in the cases of a number of hospitals, by the establishment of branch laboratories within their walls.

(*b*) A public health pathology service. This deals largely with endemic and epidemic disease (e.g., tuberculosis, venereal diseases, parasitology, etc.) and also very importantly with the prevention of disease by such means as the investigation of food contamination, water supplies and the efficiency of antiseptics, hospital filters and sterilising equipment, the inspection of rats for signs of plague and the laboratory guidance of various health services.

The wide range of activities as shown in the Table of routine work constitutes an interesting and laudable adventure. It has to be admitted, however, that experience across the years has revealed serious defects and shortcomings (referred to in detail later) in the present arrangement. These have long demanded and are now receiving attention.

The following comment gives some details of the work in individual sections. It will be noted that in most of these sections as well as in the grand total of examinations (clearly shown in the list of routine examinations) the figures for 1959 reveal a very sharp drop in comparison with those of 1958. In reality no reduction in submissions occurred in the first six months, the number of specimens received under most headings continuing to show the usual steady increase over those of previous years. The overall reduction is explained by the fact that soon after the middle of the year the newly established Institute of Clinical Pathology and Medical Research (at Lidcombe, N.S.W.) opened for general work and since that time has carried out practically all the clinical pathology (the most notable exception being venereal serology) formerly undertaken by these laboratories. With the end of 1959 the activities of the Central Laboratory had therefore been substantially reduced, and since than have been limited to certain aspects of Public Health bacteriology, Venereal Serology and the preparation of media. A corresponding reduction in staff has been effected and this Division will remain in future a much smaller unit of the Department.

For the foregoing reasons the comparison of figures for the whole year with those of previous years is not very informative.

BACTERIOLOGY

A general picture is one which emphasises various trends noted in previous reports, such as the increasingly prominent part played by epidemic Staphylococci and antibiotic sensitivity tests in the work of the bacteriologist, as well as a continued decline in the number of swabbings for diphtheria. The examination of 349 samples of milk (293 in 1958) has again proved the efficacy of local methods of pasteurisation in destroying M. Tuberculosis—no positive tests having been found in the series. The Health Inspection Division submitted an unusually large number (209) samples of proprietary disinfectants (6 only in 1958) for investigation (by Rideal Walker and other tests) of their bactericidal value and also for verification of claims in advertising. The aim is, by completing a very wide survey, to find a basis for framing a new regulation to govern the production and sale of germicides.

WATER SUPPLIES

In addition to a steadily increasing number of routine bacteriological tests on public and private water supplies the Waters section extended the scope of its work in 1959 in order to keep pace with modern ideas and as a means of satisfying the growing interest (especially in Local Government circles) in this subject:—

By instituting the membrane filtration technique on all closed-circuit swimming pool waters for the determination of enterococci—100 samples being examined.

By investigating problems due to the presence of algae in stored waters. These organisms appear to attract an increasing amount of attention in some regions, an offensive odour usually being the chief complaint. 100 samples were examined and remedies suggested where this was practicable.

By isolating Salmonellae from sewage-polluted streams in order to draw attention in appropriate quarters to the health hazards of such pollution.

By making more on-the-spot examinations of supplies (12 in all). Field bacteriological testing has also proved valuable in fostering public interest in the subject.

VENEREAL SEROLOGY

In spite of improved methods of treatment of the commonest forms of venereal disease the number of specimens of serum submitted for examination in this section has shown a steady increase in recent years, due no doubt to growth of population as well as to education of the public on this subject.

Figures of interest on this point are:—

	1954	1959
Specimens	18,856	22,924

In recent years the employment where necessary of a " battery " of tests for syphilis (Wassermann, Kahn, V.D.R.L., Meinicke and, where necessary, quantitative tests) has proved of the greatest value in this section. The collective information given by the separate tests, together with a reasonable clinical history makes it possible to give a reliable report in the great majority of cases. It is of interest to note that where it has been possible to check results by the specific Treponema Immobilisation Test the reports on a small series (submitted by air mail to an English Laboratory) have invariably agreed with those obtained here.

MEDICO-LEGAL BRANCH

Procedures for this year showed an increase of 25 per cent. over those for 1958, due to the number and variety of examinations requested by the Police Department. In recent years the practice at this Laboratory has been to have a team of three experienced medical officers (with technical assistants) available for this work. In order to eliminate the possibility of error all results and reports are studied by at least two medical officers.

Accommodation and convenience of conditions leave much to be desired in this branch, but there are good hopes of a transfer to new and modern premises in the early future.

HISTOPATHOLOGY: BIOCHEMISTRY

In each of these divisions experience has again confirmed very strongly the trends noted in recent years—chiefly a growing demand for service in all varieties of examinations. In the case of each the Table figures represent little more than 6 months activities for these two were the first sections to be wholly transferred during July to the Institute of Clinical Pathology. Both suffered more than any other parts of the laboratory from cramping and inconvenience of their quarters and the remarks of the next paragraph apply to them the more forcibly on that account.

A YEAR OF CLIMAX

The Pathological Laboratory has been a unit (first as the Bureau of Microbiology) of the Department of Public Health for almost five decades. In its early years an astonishing amount and variety of work was undertaken, not only in human but in certain animal pathology, and the Directors of the Bureau were able to undertake research which made valuable contributions to scientific knowledge. Soon, however, the increasing demand for the Laboratory's services combined with the effect of being obliged to work in unsatisfactory premises made it necessary to abandon research investigations. From this stage onward the Laboratory's story is one of insufficient room, inconvenience, lack of amenities and an ever-increasing flow of work. Annual Reports over the past 40 years rarely fail to request relief for ceaseless complaints arising from " badly congested and ill-designed laboratory accommodation ", to which were added over the years in increasing tempo poor ventilation and the dust, noise and vibration of a busy corner of the city. In addition the distance from hospitals, patients and clinicians very often impaired the usefulness and destroyed the statistical value of reports.

The year 1959 was, then, the climactic one in which a very wise idea caused this ungainly and imperfect body to be dismembered and replaced by the brand new Institute of Clinical Pathology and Medical Research.

TABLE

Showing the Routine Examinations made for the various Branches of the State Department of Public Health, other Government Departments, Subsidised Hospitals, etc.:—

	Number of Examinations Comparative Statement	
	1958	1959
Department of Public Health—		
Head Office Submissions	31,889	36,482
David Berry Hospital	268	324
Lidcombe State Hospital and Home	3,117	2,995
Liverpool State Hospital and Home	3,088	143
Newington State Hospital and Home	12	17
Waterfall, Garrawarra Hospital	530	463
Medical Officer of Health, Metropolitan District	..	10
Medical Officer of Health, Hunter River District	..	..
Randwick Chest Hospital	1,380	836
Rachel Forster Hospital	1,189	1,720
Commonwealth Government	1,588	1,681
State Departments—		
Agriculture	..	..
Education	..	..
Child Welfare	467	320
Government Stores	..	54
Milk Board	293	349
Police Department	3,351	3,373
Prisons Department	2,748	2,457
Railway Department	10	3
Miscellaneous Government Departments	124	34
Private Practitioners	36,973	27,140
Public Hospitals and Institutions (other than State Hospitals)	79,741	47,374
Municipal and Shire Councils	1,210	945
Mental Hospitals	10,233	10,405
Darlinghurst Reception House	26	2
Total Examinations (General)	178,237	137,127
Rats for Plague	355	286
	178,592	137,413

In the following Statement the Routine Work is divided into sections showing the various examinations made:—

	Number of Examinations Comparative Statement	
	1958	1959
Agglutination Tests—		
Typhoid (Widal)	447	206
Typhus (Weil Felix)	450	206
Para Typhoid A and B	882	412
Brucella Abortus	223	116
Glandular Fever (Paul and Bunnell)	253	136
Miscellaneous (Weil's Disease, etc).	2	..
Bacteriology—		
Diphtheria Swabbings	1,020	704
Diphtheria Toxicity	28	..
Haemolytic Streptococci	35	12
Vincent's Angina	3	8
Fungi (Tinea, Monilia, etc.)	18	28
Dysentery	12	103
Food Poisoning (Salmonella)	..	24
Food Poisoning (Others)	70	..
Typhoid (Cultures)	2,870	1,474
Gonorrhoea (Smear and Urine)	3,213	2,807
Leprosy	49	18
Tuberculosis (Smears)	1,257	965
Tuberculosis (Cultures and G.P.I.)	1,202	808
Tetanus	31	10
Vaccines (Autogenous vacc. from sputa, urine, etc.)	161	78
C.S.F. Cultures	1	3
C.S.F. Cell Counts	118	39
Antibiotic Sensitivity	5,648	5,238
Human Bacteriology unclassified	2,738	2,325
Urines General Examination	162	39
Food Bacteriology	155	277
Water Bacteriology	1,202	959
Milk (T.B. and B.A.)	293	349
Drugs, etc., Sterility	18	111

TABLE — *continued*

	Number of Examinations Comparative Statement	
	1958	1958
Bacteriology (*continued*)—		
Chemical Closet Contents	..	15
Disinfectants (Rideal Walker)	6	209
Utensil Swabbings	..	8
Ecto Parasites (Fleas, mites, etc.)	116	56
Endo Parasites (Worms, Ova, Cysts, etc.)	126	62
Trichomonas	1	15
Syphilis Spirochaetes	307	497
Miscellaneous Bacteriology	30	34
Epidemic Staphylococcus Aureus	678	185
Medico-Legal Examinations	3,205	4,082
Histopathology—		
Human Tissue	67,170	30,950
Malignant cells	16	4
Miscellaneous	..	..
Haematology—		
Full and Differential Counts	3,247	1,256
Group and Rh factor	102	48
Malaria	2	2
Miscellaneous	149	118
Serology—		
Quantitative Wassermann	906	995
Syphilis Wassermann	21,691	22,827
Syphilis Kahn	20,807	21,978
Syphilis Meinicke Clarification Test	6,902	7,883
Gonorrhoea (G.C.F.T.)	1,032	1,278
Hydatid (C.F.T.)	51	86
V.D.R.L.	21,535	22,827
Biochemistry—Cerebro-Spinal Fluid for—		
Colloidal Gold Test	838	456
Total Protein, Globulin	474	179
Chlorides	103	25
Sugar	65	12
Takata Ara Test	..	..
Miscellaneous	..	5
Biochemistry (Serum etc.)—		
Blood for Sugar	43	34
Blood for Sugar Tolerance	285	113
Blood for Urea	354	135
Blood for Uric Acid	227	113
Blood for Creatinine	40	36
Blood for Cholesterol	215	129
Blood for Total Protein A/G Ratio	727	569
Blood for Bromides	25	14
Serum Acid Phosphatase	186	95
Liver Function Test—T.T. and Z.T.	1,054	685
Alkaline Phosphatase	555	363
Bilirubin and V.D.B.	968	636
Cephalin Cholesterol F.T.	81	14
Urines for Sugar and Albumin	256	115
Urines for Urea	117	54
Urines General	325	156
Test Meal Specimens	83	..
Calculus	100	27
Faeces—Fats, etc.	160	116
Miscellaneous Chemical Examinations	316	176
	178,237	137,127

The following Table indicates the rats and mice destroyed and examined at Sydney and Newcastle during the Year ending 31st December, 1959:—

1959—Sydney					1959—Newcastle				
Month	R.R. Rattus	R.R. Norvegious	M. Musculus	Total	Month	R.R. Rattus	R.R. Norvegious	M. Musculus	Total
January	9	5	..	14	January	..	..	..	..
February	15	7	..	22	February	..	..	..	..
March	8	10	..	18	March	..	..	..	..
April	8	23	..	31	April	..	..	..	..
May	6	19	..	25	May	..	..	..	..
June	8	18	..	26	June	..	..	..	..
July	15	14	..	29	July	..	..	..	..
August	1	28	..	29	August	..	..	..	..
September	2	25	..	27	September	..	..	..	..
October	1	19	..	20	October	..	..	..	..
November	10	14	1	25	November	..	..	..	..
December	11	9	..	20	December	..	..	..	..
Total	94	191	1	286		..	..	..	..

Milks Examined for T.B. and B.A. for 1959

31 pasteurised and 317 raw milks examined for 1959 = 348 milks plus 1 cream.

Number positive for T.B.—Nil.

Number positive for B.A.—28 (all raw milks).

19 Milks—animals died before test was completed, no results.

11 Milks rejected because of bad labelling.

THE INSTITUTE OF CLINICAL PATHOLOGY AND MEDICAL RESEARCH ANNUAL REPORT FOR YEAR ENDING 31st DECEMBER, 1959

Director: H. Kramer, M.B., Ch. B. (Capetown), D. Phil. (Oxon.), M.C.P.A.

Introduction

In order to cater for the ever increasing demand for Clinical Pathological investigations, the New South Wales Department of Public Health has established The Institute of Clinical Pathology and Medical Research at Lidcombe. This Institute is equipped and staffed to take over and expand the range of Clinical Pathology which for many years has been carried out under great difficulties at the Microbiological Laboratories in Macquarie Street. The establishment of this Institute is a departure from the previous system in that it involves the separation of the Clinical Pathological and Public Health components of the Departmental laboratory service. The need for a centralized Institute of this sort stems from the peculiar distribution of population in New South Wales. Because of this few hospitals are large enough to justify the provision of full laboratory facilities.

The building of the Institute was commenced in mid-1958 and recruitment of senior staff began towards the end of that year. The Director took up duty in February, 1959 and with the help of the Clerical Officer and one female Office Assistant began work on the problems of planning, equipping and staffing the Institute. Early in April the Senior Biochemist became available to assist with this work, and in May this group was reinforced when the Virologist joined them. A great deal of preliminary work involved in establishing the Institute was accomplished in these few months so that when the buildings became available towards the end of June a substantial nucleus of staff had been recruited and many thousands of items of equipment had been ordered. Two weeks were occupied in organizing and setting up the laboratories, and on 7th July the transfer of the various sections from the Microbiological Laboratories began. This move, together with that of the Laboratory of the Lidcombe State Hospital, was completed in three days, and it is a pleasure to acknowledge the splendid service rendered by all the members of the staff of the Institute in achieving this feat. Despite formidable difficulties everyone worked enthusiastically, and although many were newcomers to the service, the entire changeover was achieved without any interruption to the Clinical Pathology service provided by the Department. The activities involved in establishing the Institute culminated in the official opening ceremony by the Minister for Health, the Hon. W. F. Sheahan, Q.C., LL.B. M.L.A. which took place before a large and distinguished audience on Saturday, 12th December, 1959

Functions

The Institute has three main functions, viz:—

(*a*) to provide a centralized and comprehensive Clinical Pathology service for the entire State of New South Wales;

(*b*) to conduct medical research, with particular emphasis on the pathological changes which occur in chronic diseases and in the aged; and

(*c*) to provide a training centre for technical staff, science graduates and post-graduate medical students wishing to specialize in Clinical Pathology.

Staff

Apart from the Director, the staff of the Institute includes two Senior Pathologists, a Haematologist and a Bacteriologist, all of whom are medical graduates with appropriate specialist qualifications. The Laboratory Superintendent is also a medical graduate. The specialist staff also includes the Senior Biochemist and the Virologist, both science graduates with specialist qualifications in their particular fields. In addition, there are 10 microbiologists with science degrees or diplomas, 2 histological technicians, 5 laboratory assistants, 7 laboratory assistants-in-training, 10 laboratory attendants, a scientific instrument maker, clerical staff, cleaners, etc., making a total of about 50.

Buildings and Equipment

The Institute is housed in a single-storied H-shaped building of monocrete construction which contains laboratories for Biochemistry, Haematology, Histopathology, Bacteriology and Virology. This main building also accommodates the General Office, Library, Lecture Room, Photographic department, Radio-Isotope laboratories and various cubicles where visiting patients can be examined.

A basement under the western wing of the main block contains the amenities rooms for staff, store rooms and portion of the workshop set aside for " clean " work (optical, electronic, drawing, etc.). There is a separate Animal House which also accommodates the carpentry and engineering sections of the workshop, and another small outbuilding serves as a garage and bulk store.

The most modern equipment is provided throughout for both routine diagnostic pathology and research, and includes such specialized instruments and apparatus as a recording spectrophotometer, ultracentrifuge, radio-isotope counting equipment, and a comprehensive range of accessories for specialized microscopy. The workshops are provided with the necessary precision power tools to enable existing instruments to be maintained and repaired and new apparatus fabricated.

Sources of Specimens and Scope of Work Undertaken

A large number of specimens is received daily by post and air-freight from all over the State. These are accepted from all Public, State and Mental Hospitals and also from medical practitioners attending patients who are unable to afford the fees of a private pathologist. The Institute also provides the laboratory service for the Lidcombe State Hospital and Home and a substantial portion of the work comes from this source.

The Clinical Pathology service provided by the Institute is as comprehensive and up-to-date as possible and the aim is to undertake any laboratory test of proved value. Already several investigations not previously available in New South Wales are being carried out and the range is being constantly expanded with the result that even some of the large Teaching Hospitals are now submitting specimens for tests which they themselves do not undertake.

Organization and Administration

Although located in the grounds of the Lidcombe State Hospital and Home, the Institute is not part of the hospital but is administered as a separate Division within the Department of Public Health. This autonomy is most important as the field of influence and activity of the Institute extends far beyond the confines of the Hospital and, in fact, embraces the whole State. It does, however, impose a considerable burden of administration and if the Institute is to fulfil its functions the organizational and clerical aspects of the work must be maintained at a high level of efficiency.

As far as the Clinical Pathology service is concerned the policy is simple and clear-cut and is based on the following considerations:—

(*a*) Every specimen comes from a sick patient and must therefore be treated as a matter of urgency.

(*b*) Wrong or misleading information is worse than no information at all when it comes to treating disease and so it is essential that reports be absolutely accurate and worded in such a way that no misinterpretation is possible.

(*c*) As soon as the investigation of a specimen is completed the report must be despatched as rapidly as possible.

These fundamental considerations are constantly emphasized to all members of the staff and all the activities of the various sections are directed towards achieving these objectives.

Day to day policy is decided at a meeting between the Director, the Laboratory Superintendent and the Clerical Officer which takes place first thing each morning, and there is also a monthly meeting of the entire scientific staff where everyone has the opportunity of drawing attention to any difficulties and suggesting ways in which the service might be improved. The heads of the various sections are allowed considerable discretion in administering their own departments provided always that their activities are directed towards implementing the policy stated above.

Much of the detailed administration is delegated to the Laboratory Superintendent and the Clerical Officer. The former deals with such matters as the maintenance of stocks of chemicals, apparatus, etc., discipline, leave and duty rosters of the junior scientific staff, and the very numerous minor administrative details involved in the running of a large laboratory; while the latter is concerned with the efficient running of the office, supervision of the clerical staff, maintenance of an efficient records and indexing system for the numerous specimens handled, as well as such things as the compilation of requisitions, stock cards and the checking of invoices, etc.

The administrative and clerical work is very heavy. During the period of under six months since the Institute began to function 9,614 specimens were received and on these 18,494 tests were carried out, and these figures have shown a steady upward trend. Every specimen received has to be registered and indexed and typewritten reports must be prepared and dispatched as quickly as possible. Apart from this there is all the clerical work involved in the normal running of any Public Service department. While the laboratories have, in general, managed to maintain an adequate rate of output, the clerical work has been a constant source of anxiety. The existing staff establishment has proved inadequate and there have been several crises when the entire system has come close to collapse owing to the absence through illness of one or other of the office assistants. Overtime work and the employment of temporary assistants have proved unsatisfactory expedients and consequently it has become necessary to seek an increase in the establishment of clerical staff.

Clinical Pathology

The following is a brief résumé of the work of the various departments:—

PATHOLOGICAL ANATOMY AND HISTOLOGY

This department deals with the macroscopic and microscopic changes produced in the tissues by various diseases, and the interpretation of these changes as a means of diagnosis. On the basis of the number of specimens received between 7th July, 1959 and 31st December, 1959, it is estimated that between 5,000 and 5,500 will be dealt with in a full year. Most of these specimens are removed surgically but it is hoped that early in the New Year, when the staff establishment is built up, all the post-mortem work for the Lidcombe State Hospital will be undertaken by this department. It is estimated that 250 to 300 autopsies will be carried out per year and this will involve a very substantial increase in the amount of histological work, as an average of 10 to 12 specimens for microscopic examination will be collected at each autopsy.

While many of the country and smaller metropolitan hospitals have laboratories where a certain amount of biochemistry, haematology and bacteriology is carried out, it is rare for any but the largest hospitals to undertake histological diagnosis so that the service provided by the Institute in this branch of Clinical Pathology is of the greatest value.

It is the intention to extend the present service to include ophthalmic pathology as at present there are no specialized facilities for this difficult branch of pathology in New South Wales.

Among the other activities which are undertaken by this department are the compilation of reference collections of microscopic sections for teaching purposes and the building up of a museum of pathological specimens.

Biochemistry

The chemical analyses required in clinical medicine have so increased in number and complexity in recent years that this department must remain one of the most progressive in an Institute of this kind. During the period under review 2,482 specimens were received for bio-chemical analysis and on these 5,203 tests were carried out. A large proportion of this work is concerned with various tests of liver and kidney function; in addition, there is a constant demand for a great variety of other chemical investigations. Much of the effort in this department is directed towards improving, simplifying and standardizing methods used in such common determinations as blood urea, serum cholesterol, calcium, etc. There is a growing demand for urinary steroid chemistry and, as yet, only a few laboratories are prepared to undertake this work. In catering for this demand the Institute provides a very valuable service. Electrophoresis and chromatography are extensively used, whilst another highly refined technique—fluorimetry—is being utilized for estimations of such things as catechol amines and certain vitamins and enzymes.

Apart from the entire range of routine biochemical investigations, the Institute already undertakes such other and much less commonly available estimations as ketogenic and hydroxy steroids, catechol amines, acetylcholine esterase, copper oxidase, glutamic-oxaloacetic transaminase, serum iron and iron-binding capacity, amino-acid excretion, etc.

The biochemistry department will also be the main centre using radio-isotope methods and, apart from pursuing its own lines of research, is expected to occupy a key position in the research activities of most of the other departments.

Haematology

Unlike most of the other sections, the haematology department receives comparatively little work from outside the Lidcombe State Hospital and Home, for the very good reason that blood specimens for haematological investigation deteriorate rapidly so that specimens received from afar are of little value for diagnostic purposes. However, the medical staff of the Lidcombe State Hospital are making a considerable and increasing use of the greatly improved facilitiesfor haematological investigation now available to them, while the amount of work from Garrawarra and Newington State Hospitals is also on the increase. There is, moreover, a steady rise in the number of patients referred personally to the Institute for haematological investigations.

Apart from routine diagnostic work this department is preparing to carry out such special investigations as the microbiological assay of Vitamin B12 and Folic Acid. At present specimens requiring analysis for these haematinic factors have to be sent as far afield as Western Australia as no organization in New South Wales carries out this work. It is expected also that in the near future the haematology department will be making considerable use of radio-isotopes in investigating blood diseases

BACTERIOLOGY

This is by far the busiest department in the Institute. A comprehensive range of bacteriological and serological tests is undertaken and these are constantly being added to. There is a steadily increasing demand for antibiotic sensitivity tests both for tubercle bacilli and other organisms, and work is in progress to develop more rapid methods for determining the final sensitivity result. Apart from clinical bacteriology, the department is assisting in the Public Health sphere by checking milk samples for tubercle bacilli and brucella.

Facilities are at present being organized for making available some of the more highly specialized branches of bacteriology. These are several important types of investigation which are either not carried out at all in N.S.W., or which are undertaken by some of the larger hospitals only for their own patients. For example, the Institute is establishing a salmonella reference laboratory; a service for the identification of pathogenic coliform bacilli and atypical strains of tubercle bacilli as well as such other undertakings as the bacteriophage typing of staphylococcus aureus, identification of pathogenic fungi and certain serological tests of value in the diagnosis of auto-immune diseases.

Virology

One of the most valuable and generally welcome facilities available at the Institute is a virus diagnostic service. Virology is only now emerging from the research into the diagnostic field and as yet very few laboratories are equipped to deal with this branch of Clinical Pathology. This is true not only of Australia but applies throughout the world. The Virology department offers a diagnostic service covering some 20 main varieties of virus disease. Since work began in this section in August, many positive specimens have been found, among the viruses isolated being poliovirus types I, II and III, adenovirus and a variety of ECHO and Coxsackie viruses. In addition many antibody titrations have been carried out, covering such diseases as poliomyelitis, Q-fever, psittacosis, mumps, etc.

As a result of the cordial co-operation of the Research Committee of the N.S.W. Faculty of the College of General Practitioners a system of " spotters " has been instituted. Under this system eight medical practitioners distributed in various suburbs around Sydney submit specimens from cases of suspected virus disease which they encounter in their practices. It is hoped that as a result of this co-operation it will be possible to collect information on the virus ecology of Sydney, the seasonal changes which occur, and also to get forewarning of epidemics of such diseases as influenza and other acute respiratory virus infections.

The virology department also provides laboratory investigations in connection with the Poliomyelitis Vaccination Campaign and the activities of its Surveillance Committee, and is participating in a survey of the causes of infantile diarrhoea in collaboration with the Renwick Hospital for Infants.

Teaching and Research

Little can be said about these two functions of the Institute at this stage as neither has as yet gone beyond the preliminary planning stage.

Research activities are not expected to be seriously developed before mid-1960, as the few months which have elapsed since the Institute first began to function have been fully occupied in establishing the Clinical Pathological work on a sound basis. Apart from this, much of the specialized equipment, though ordered, is not yet available and the staff establishment, particularly at the higher levels, is not expected to be complete before April, 1960.

Teaching programmes, too, remain to be implemented in the New Year when additional Laboratory Assistants-in-Training are to be recruited. An approach has been made to Sydney University to have the Institute recognized as a fully approved training laboratory for post-graduate medical students for the Diploma in Clinical Pathology, and until this approval is forthcoming no medical graduates can be recruited for training as pathologists.

Ancillary Facilities

Animal House

A start has been made towards establishing the Animal House and tenders have been called for the supply of cages to accommodate guinea-pigs, mice, rats and rabbits.

It is expected that the heaviest demands will be for guinea-pigs for use in tuberculosis diagnosis and in the control of milk supplies. They will also be required for producing virus antisera and as a source of cells and complement for use in various serological tests. Large numbers of mice will be required for virology and rabbits will be needed for serological work and also for producing assorted antisera for use in bacteriology and virology. Rats will be mainly used for research purposes. It is proposed also, to maintain a small stock of toads for pregnancy diagnosis as there is a constant demand for this service.

Photography

The photographic department is equipped to cater for most types of photography useful in clinical as well as laboratory work. The clinical component will be utilized mainly by the staff of the Lidcombe State Hospital who are anxious to have photographic records of the many interesting clinical conditions available among the inmates. On the laboratory side adequate photographic facilities are an indispensable research adjunct and it is expected that a considerable amount of both still and cine-photography, particularly at the microscopic levels, will be required for teaching purposes and also publication.

LIBRARY

The remoteness of the Institute from the main reference libraries in the City and at the Universities makes the provision of adequate library facilities a matter of great importance.

Expert advice on a wide variety of medical problems is constantly being sought of the specialist staff of the Institute and it is essential that ready access to the necessary information be available.

If the Institute is to keep abreast of world developments in Clinical Pathology it is necessary that all new innovations and techniques which appear promising be tried out; if they do prove of value they should be incorporated into the range of investigations offered by the Institute.

Then again, as research is an important aspect of the Institute's activities, ready access to the relevant literature is essential if time and effort are not to be wasted in duplicating work already done elsewhere. Apart from this consideration, the first requirement is that those embarking on any research project be thoroughly familiar with the background to the problem to be investigated so that a purposeful programme can be developed on the firm foundations of existing knowledge.

Finally, in any organization concerned with training, the teachers must be able to keep abreast of modern developments and those who are being trained must be encouraged and guided in the use of the appropriate scientific literature.

With all these considerations in mind a fairly comprehensive list of reference texts and current journals has been ordered for the library at the Institute.

WORKSHOP

The workshops are equipped with necessary precision power and hand tools to undertake the fabrication of new apparatus as well as the maintenance of existing equipment. Facilities are available for metal, wood and plastic, as well as electrical, electronic and optical work and a full time Scientific Instrument Maker is employed. The workshop is most useful and a large programme is planned for it. No modern research organization can be considered complete without the necessary facilities for modifying existing equipment or constructing new instruments and apparatus to enable refinements to be introduced into techniques of investigation.

Acknowledgements and Conclusions

An auspicious start has been made towards establishing the Institute of Clinical Pathology and Medical Research as an important and influential force in the medical service provided by the State in New South Wales. Already a considerable amount of goodwill has been engendered between the Institute and the medical practitioners and hospital authorities with whom it deals, and it is the constant endeavour of all the staff to consolidate and extend this by maintaining a service of the highest quality.

The successful establishment of the Institute in so short a time is the result of the combined efforts of many people working towards a common end. Tribute has already been paid to the splendid performance of the whole staff of the Institute, but their efforts would have been of little avail were it not for the cordial and helpful co-operation of a number of outside individuals and Public Service departments. While it would be difficult to acknowledge all the help received, mention should be made of the outstanding contributions of the Public Works Department, the Government Stores Department, the Public Service Board and the Treasury, as well as the several administrative sections of the Department of Public Health. A special tribute is due to Dr. F. Fraser, Director of the Microbiological Laboratories, whose advice and assistance not to mention the willing sacrifice of several members of his staff and much of his equipment, contributed so greatly towards enabling the Institute to overcome the initial problems of establishment.

The coming year should see the consolidation of the foundations already laid, with the development and extension of the Clinical Pathology service as well as the implementation of teaching and research programmes. It is earnestly to be hoped that the goodwill and co-operation of all those who have contributed so conspicuously to the birth of this Institute can be retained so that its growth and development can proceed unhampered by frustration and petty irritation. It is the enthusiasm and keenness of its staff which can confer on an institution of this sort, real distinction. But if this enthusiasm is undermined by administrative delays and inconsistencies, distinction can easily be reduced to complacent mediocrity. If the conditions which have obtained to date continue there is every reason to hope that the Institute of Clinical Pathology and Medical Research will make a substantial contribution to the medical services of this State and thereby enhance the prestige of the New South Wales Department of Public Health.

Appendix

STATISTICAL SUMMARY OF EXAMINATIONS CARRIED OUT
YEAR ENDING DECEMBER 31ST, 1959

Haematology

Full and Differential Blood Counts	268
Blood Group and Rh Type	153
Bone Marrow Examinations	6
Prothrombin Estimations	74
Clotting Time	7
Haemoglobin Estimations	920
Erythrocyte Sedimentation Rate	56
Cerebro Spinal Fluid Cell Count	88
Mantoux Tests	62
Miscellaneous	2

Biochemistry

C.S.F. Colloidal Mastic Reaction	421
C.S.F. Globulin	185
C.S.F. Chlorides	83
C.S.F. Glucose	64
Blood Glucose	93
Blood Glucose Tolerance	41
Blood Urea	605
Blood Uric Acid	96
Blood Creatinine	2
Blood Cholesterol	118
Blood Total Protein and Albumin/Globulin Ratio	241
Blood Bromides	57
Serum Calcium	51
Serum Acid Phosphatase	122
Serum Thymol Turbidity	772
Serum Zinc Sulphate Flocculation	772
Serum Alkaline Phosphatase	510
Serum Bilirubin and van den Bergh Reaction	460
Serum Cephalin Cholesterol Flocculation Test	14
Serum p-Amino Salicylic Acid	22
Serum Sodium	44
Serum Potassium	49
Serum Phosphorus	31
Serum Chlorides	15
Serum Amylase	11
Serum Electrophoresis	34
Urine Glucose	2
Urine Protein	2
Urine 17-Ketosteroids	67
Calculi	14
Faeces for Fat Analysis	45
Faeces for Occult Blood	115
Miscellaneous	45

Histopathology

Biopsy Specimens	2,434
Exfoliative Cytology	34
Number of Sections Cut	5,956

Bacteriology

Widal Reaction	16
Weil-Felix Reaction	9
Brucella Agglutination	35
Paul-Bunnell Reaction	64
Miscellaneous Serology	3
C. diphtheriae Cultures	392
Haemolytic Streptococci	17
Vincent's Angina	33
Fungi	77
Dysentery	2
Salmonella	61
Typhoid	2
Gonococcal Examinations	314
Leprosy	17

WELLCOME INSTITUTE LIBRARY

Sputum Smears	768
Cultures for M. Tuberculosis	1,296
Vaccines Prepared	29
Cerebro Spinal Fluid Cultures	2
Cerebro Spinal Fluid Cell Counts	5
Antibiotic Sensitivity Tests	5,958
Urine: Chemical Examination	415
Urine: Microscopic Examination	415
Faeces for Parasitology	44
Blood Cultures	11
Trichomonas	5
Dark-ground Examinations for Syphilis	4
Cultures for Staphylococcus Aureus	209
Miscellaneous Bacteriology	117

Virology

Specimens for Poliovirus	12
Other Viruses	59

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